



TEST REPORT

Reference No. : WTX24X10240801E
Applicant : Lumi United Technology Co., Ltd
Address : Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China
Manufacturer : Lumi United Technology Co., Ltd
Address : Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China
Product Name : Light Switch H2 Vertical (4 Buttons, 3 Channels), Light Switch H2 Vertical (2 Buttons, 2 Channels), Light Switch H2 Vertical (2 Buttons, 1 Channel)
Model No. : WS-K04E
Standards : AS 60669.2.1:2020
Date of Receipt sample : 2025-02-07
Date of Test : 2025-02-07 to 2025-02-11
Date of Issue : 2025-02-12
Test Report Form No. : WTX_AS 60669.2.1_2020_B
Test Result : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

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Toby Zhang/Project Engineer

Approved by:

Evan Cai/Manager



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Report version

Version No.	Date of issue	Description
Rev.00	2025-02-12	Original
/	/	/

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Light Switch H2 Vertical (4 Buttons, 3 Channels), Light Switch H2 Vertical (2 Buttons, 2 Channels), Light Switch H2 Vertical (2 Buttons, 1 Channel)
Trade Name:	Aqara
Model No.:	WS-K04E
Adding Model(s):	WS-K03E, WS-K02E
<p><i>Note: The test data is gathered from production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model WS-K04E, but the circuit and the electronic construction do not change, declared by the manufacturer.</i></p>	

Technical Characteristics of EUT	
Power Supply:	120-240VAC
Power Adaptor:	/
Cable:	/
Rated Power:	/
Rated Current:	10A
Highest Internal Frequency:	Below 108MHz



1.2 Test Standards

The tests were performed according to following standards:

AS 60669.2.1:2020: SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-1: Particular requirements – Electronic control devices

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

1.3 Test Location

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address:

1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70

Bao'an District, Shenzhen, Guangdong, China

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1.4 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission. The test modes were adapted according to the operation manual for use, more detailed description as follows:

No	Title	Description
TM1	Working Mode (Model: WS-K04E)	AC 240V/50Hz
TM2	Standby Mode (Model: WS-K04E)	AC 240V/50Hz
TM3	Working Mode (Model: WS-K03E)	AC 240V/50Hz
TM4	Standby Mode (Model: WS-K03E)	AC 240V/50Hz
TM5	Working Mode (Model: WS-K02E)	AC 240V/50Hz
TM6	Standby Mode (Model: WS-K02E)	AC 240V/50Hz

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
bulb	/	/	/

1.5 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions (AC Mains 9k - 150kHz)	±3.74dB
Conducted Emissions (AC Mains 150k - 30MHz)	±3.34dB



1.6 Test Equipment List and Details

Conducted radio-frequency emission on main terminals (9kHz-30MHz)					
Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
LISN	Rohde & Schwarz	ENV 216	100097	2024-02-24	2025-02-23
EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2024-02-24	2025-02-23
EMI Test Software (Conducted Emission Room 2#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3	/	/

Low-frequency emission - Harmonic distortion

Low-frequency emission - Voltage fluctuations and flicker

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
Power Source	California Instrument	5001IX-CTS-400	60077	2024-02-24	2025-02-23
Digital Power Analyzer	California Instrument	CTS	72831	2024-02-24	2025-02-23
Test Software (Harmonics & Flicker)	AMETEK	CTS4	4.32	/	/

Electrostatic discharge test

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
ESD Generator	LIONCEL	ESD-203B	0170901	2024-02-26	2025-02-25

Electrical fast transient/burst test (Supply terminals)

Surge immunity test for 1,2/50 wave impulses (Mains terminals)

Voltage dips and short interruptions

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2024-03-19	2025-03-18
Transient 2000	EMC PARTNER	TRA2000	836	2024-03-19	2025-03-18

Power-frequency magnetic field test

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
Instantaneous PMF Generator Module	LIONCEL	PMF-801C-T	0171001	2024-02-24	2025-02-23
PMF Antenna	LIONCEL	PMF-801C-A	0180302	2024-02-24	2025-02-23
PMF Generator	LIONCEL	PMF-801C-C	0171101	2024-02-24	2025-02-23



2. SUMMARY OF TEST RESULTS

Item	Standard	Method	Result
Conducted radio-frequency emission on main terminals (9kHz-30MHz)	AS 60669.2.1:2020	CISPR 15	Compliant
Low-frequency emission - Harmonic distortion	AS 60669.2.1:2020	IEC 61000-3-2 Cause 6	Compliant
Low-frequency emission - Voltage fluctuations and flicker	AS 60669.2.1:2020	IEC 61000-3-3 Clause 6	Compliant
Electrostatic discharge test	AS 60669.2.1:2020	IEC 61000-4-2	Compliant
Electrical fast transient/burst test (Supply terminals)	AS 60669.2.1:2020	IEC 61000-4-4	Compliant
Surge immunity test for 1,2/50 wave impulses (Mains terminals)	AS 60669.2.1:2020	IEC 61000-4-5	Compliant
Power-frequency magnetic field test	AS 60669.2.1:2020	IEC 61000-4-8	Compliant
Voltage dips and short interruptions	AS 60669.2.1:2020	IEC 61000-4-11	Compliant



3. Emission Test Results (EMI)

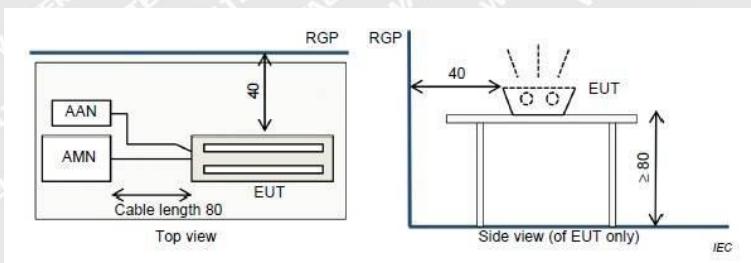
3.1 Conducted radio-frequency emission on main terminals (9kHz-30MHz)

Test Requirement:	AS 60669.2.1 Clause 26.2.2	
Test Limit:	0.009MHz – 0.05MHz	136dB(µV) quasi-peak
	0.05MHz – 0.15MHz	116dB(µV)-106dB(µV) quasi-peak
	0.15MHz – 0.5MHz	92dB(µV)-82dB(µV) quasi-peak, 82dB(µV)-72dB(µV) average
	0.5MHz – 5MHz	82dB(µV) quasi-peak, 72dB(µV) average
	5MHz – 30MHz	86dB(µV) quasi-peak, 76dB(µV) average
	Detector:	Peak for pre-scan (200Hz resolution bandwidth) 0.009M to 0.15MHz Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz
Test Method:	CISPR 15	
Procedure:	An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.	

3.1.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	54 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM2, TM3, TM4, TM5, TM6

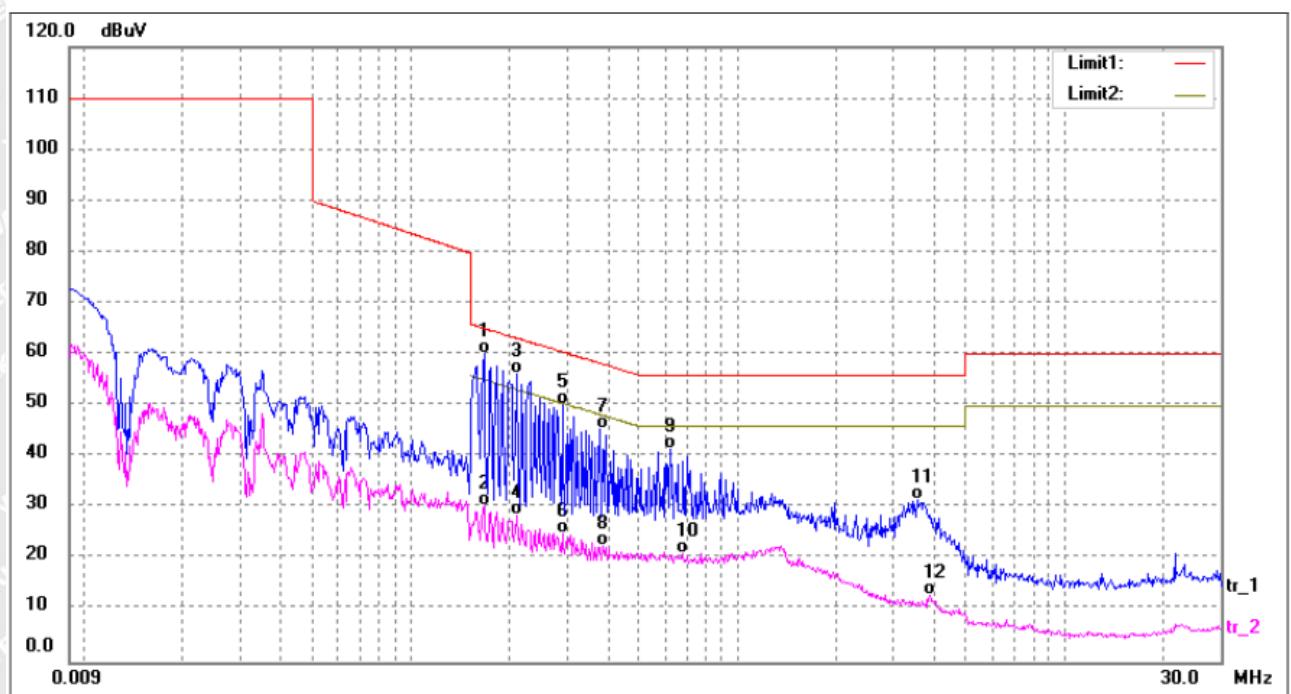
3.1.2 Basic Test Setup Block Diagram



3.1.3 Summary of Test Results



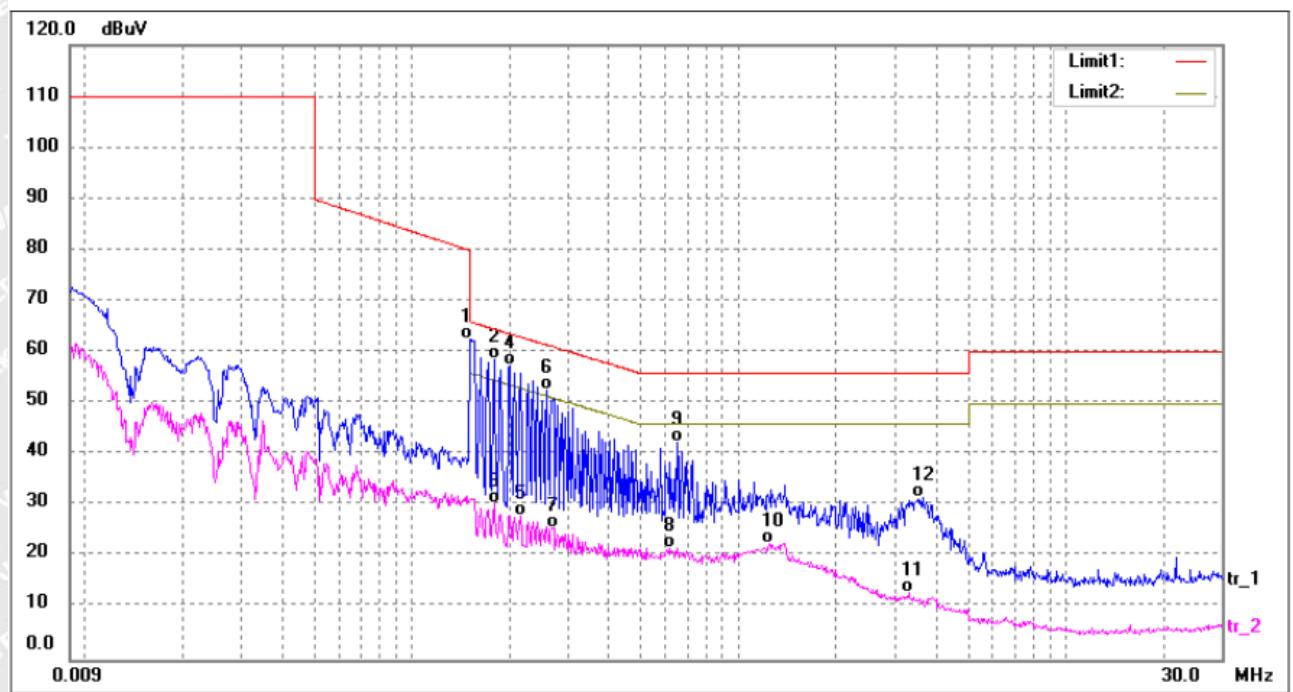
TM1 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1660	50.38	9.70	60.08	65.15	-5.07	QP
2	0.1660	20.66	9.70	30.36	55.15	-24.79	AVG
3	0.2100	46.55	9.58	56.13	63.20	-7.07	QP
4	0.2100	19.19	9.58	28.77	53.20	-24.43	AVG
5	0.2900	40.53	9.63	50.16	60.52	-10.36	QP
6	0.2900	15.46	9.63	25.09	50.52	-25.43	AVG
7	0.3780	35.91	9.68	45.59	58.32	-12.73	QP
8	0.3860	12.83	9.68	22.51	48.15	-25.64	AVG
9	0.6220	31.98	9.71	41.69	56.00	-14.31	QP
10	0.6740	11.57	9.70	21.27	46.00	-24.73	AVG
11	3.5300	22.14	9.65	31.79	56.00	-24.21	QP
12	3.8620	3.40	9.66	13.06	46.00	-32.94	AVG



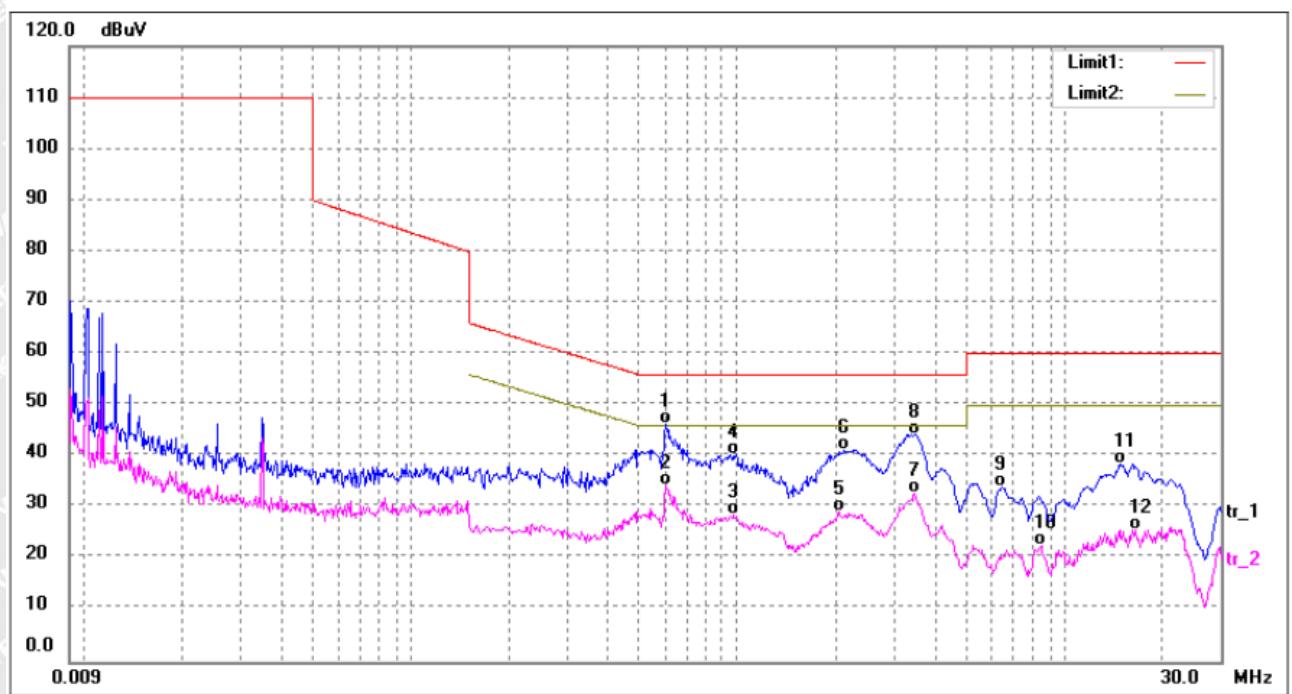
TM1 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	52.81	9.76	62.57	65.99	-3.42	QP
2	0.1780	49.13	9.66	58.79	64.57	-5.78	QP
3	0.1780	20.86	9.66	30.52	54.57	-24.05	AVG
4	0.1980	47.90	9.58	57.48	63.69	-6.21	QP
5	0.2140	18.36	9.58	27.94	53.04	-25.10	AVG
6	0.2580	42.91	9.61	52.52	61.49	-8.97	QP
7	0.2660	16.10	9.62	25.72	51.24	-25.52	AVG
8	0.6180	12.16	9.71	21.87	46.00	-24.13	AVG
9	0.6500	32.69	9.70	42.39	56.00	-13.61	QP
10	1.2460	13.06	9.66	22.72	46.00	-23.28	AVG
11	3.3060	3.32	9.63	12.95	46.00	-33.05	AVG
12	3.6420	22.07	9.65	31.72	56.00	-24.28	QP



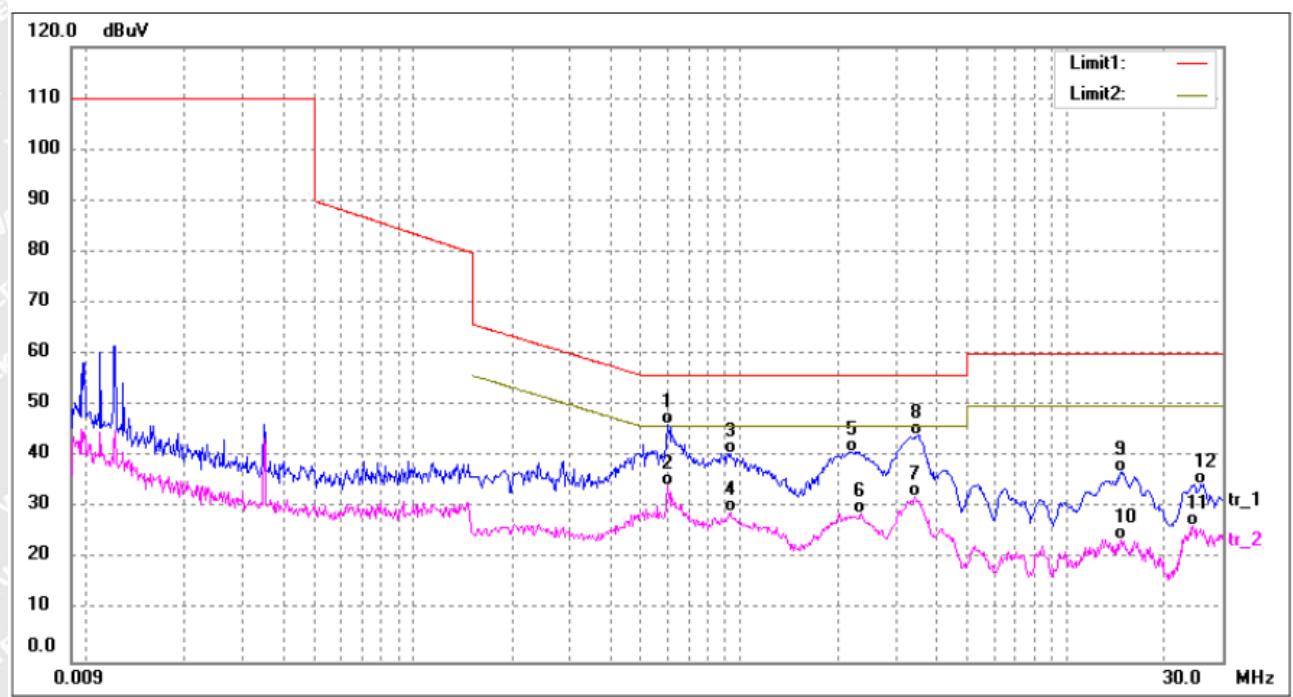
TM2 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.6060	36.68	9.71	46.39	56.00	-9.61	QP
2	0.6060	24.72	9.71	34.43	46.00	-11.57	AVG
3	0.9740	19.04	9.67	28.71	46.00	-17.29	AVG
4	0.9900	30.72	9.67	40.39	56.00	-15.61	QP
5	2.0340	19.63	9.62	29.25	46.00	-16.75	AVG
6	2.1220	31.75	9.62	41.37	56.00	-14.63	QP
7	3.4700	23.12	9.64	32.76	46.00	-13.24	AVG
8	3.4980	34.71	9.64	44.35	56.00	-11.65	QP
9	6.4260	24.22	9.77	33.99	60.00	-26.01	QP
10	8.4900	12.93	9.84	22.77	50.00	-27.23	AVG
11	14.7140	28.59	9.97	38.56	60.00	-21.44	QP
12	16.5260	15.71	10.06	25.77	50.00	-24.23	AVG



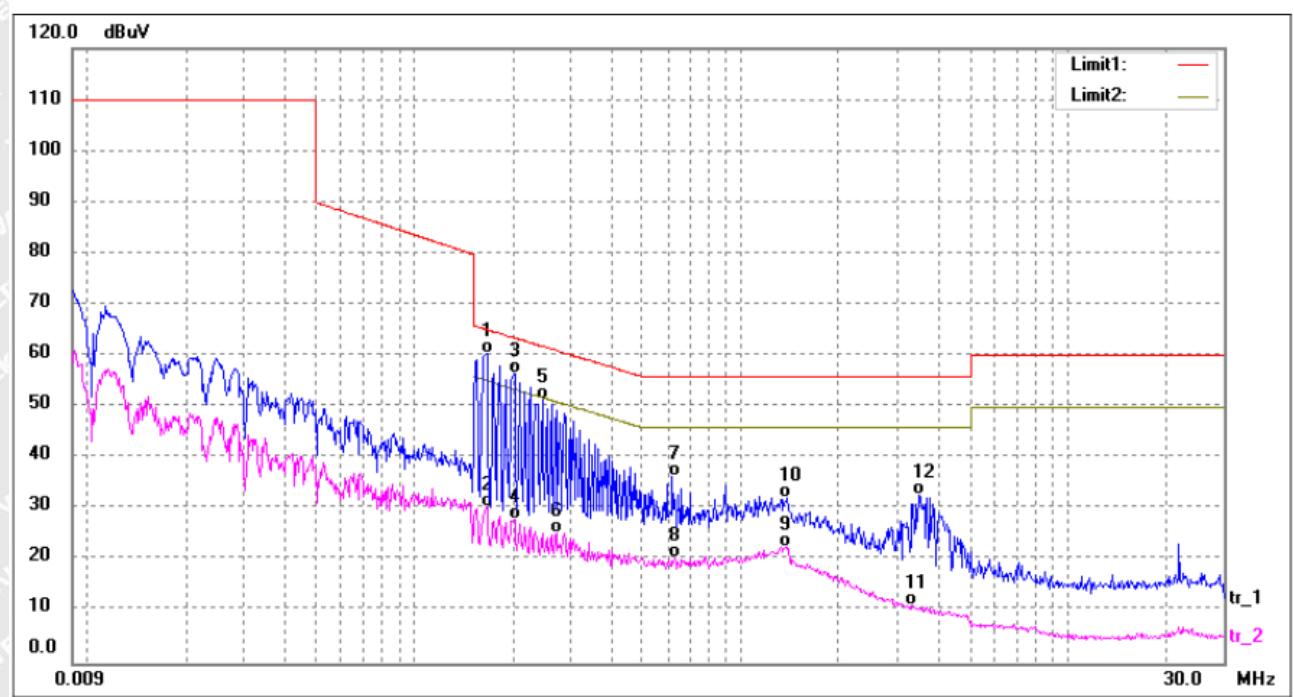
TM2 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.6060	36.74	9.71	46.45	56.00	-9.55	QP
2	0.6060	24.75	9.71	34.46	46.00	-11.54	AVG
3	0.9180	31.01	9.67	40.68	56.00	-15.32	QP
4	0.9380	19.55	9.68	29.23	46.00	-16.77	AVG
5	2.2659	31.44	9.62	41.06	56.00	-14.94	QP
6	2.3660	19.44	9.62	29.06	46.00	-16.94	AVG
7	3.4220	22.66	9.63	32.29	46.00	-13.71	AVG
8	3.5300	34.55	9.65	44.20	56.00	-11.80	QP
9	14.6860	27.10	9.97	37.07	60.00	-22.93	QP
10	14.6860	14.02	9.97	23.99	50.00	-26.01	AVG
11	24.4260	16.42	10.14	26.56	50.00	-23.44	AVG
12	25.8620	24.52	10.12	34.64	60.00	-25.36	QP



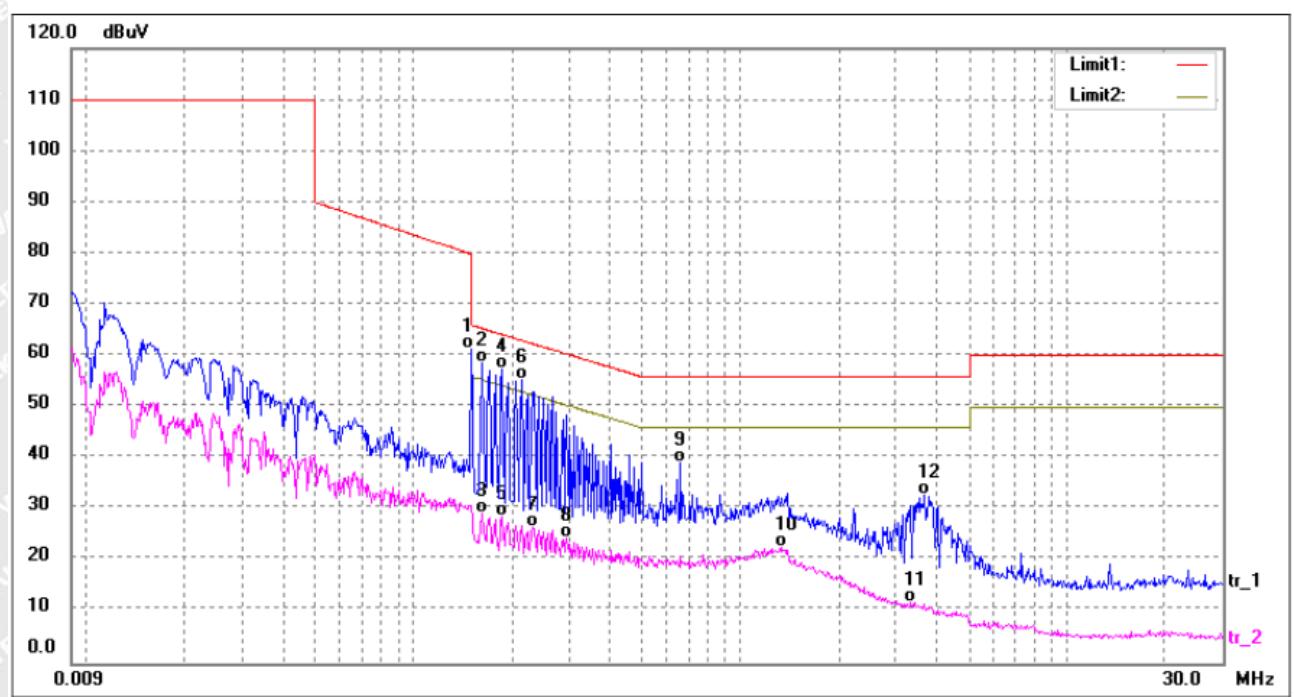
TM3 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1660	50.67	9.70	60.37	65.15	-4.78	QP
2	0.1660	20.82	9.70	30.52	55.15	-24.63	AVG
3	0.2020	46.99	9.57	56.56	63.52	-6.96	QP
4	0.2020	18.48	9.57	28.05	53.52	-25.47	AVG
5	0.2460	41.76	9.60	51.36	61.89	-10.53	QP
6	0.2700	15.79	9.62	25.41	51.12	-25.71	AVG
7	0.6180	26.81	9.71	36.52	56.00	-19.48	QP
8	0.6300	10.89	9.70	20.59	46.00	-25.41	AVG
9	1.3740	13.04	9.65	22.69	46.00	-23.31	AVG
10	1.3940	22.58	9.65	32.23	56.00	-23.77	QP
11	3.3740	1.56	9.63	11.19	46.00	-34.81	AVG
12	3.5180	23.29	9.65	32.94	56.00	-23.06	QP



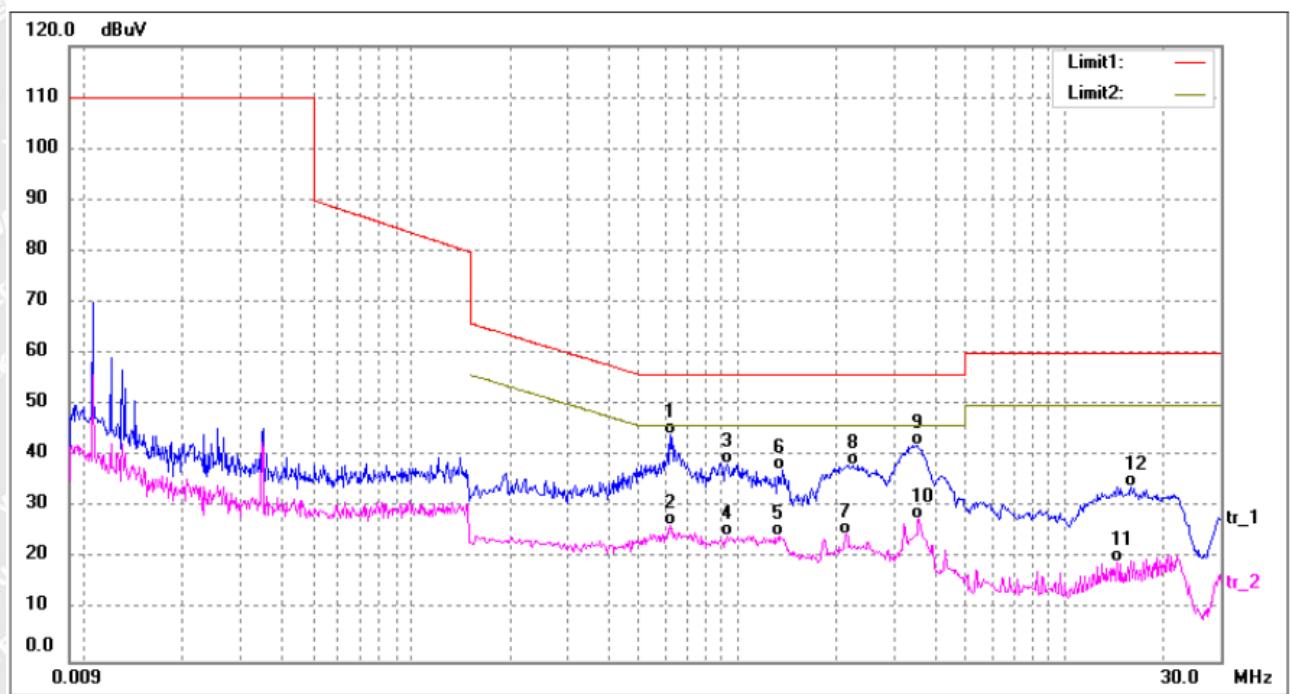
TM3 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	51.55	9.76	61.31	65.99	-4.68	QP
2	0.1620	48.94	9.72	58.66	65.36	-6.70	QP
3	0.1620	19.54	9.72	29.26	55.36	-26.10	AVG
4	0.1860	47.92	9.62	57.54	64.21	-6.67	QP
5	0.1860	18.99	9.62	28.61	54.21	-25.60	AVG
6	0.2140	45.67	9.58	55.25	63.04	-7.79	QP
7	0.2300	16.92	9.59	26.51	52.45	-25.94	AVG
8	0.2940	14.77	9.64	24.41	50.41	-26.00	AVG
9	0.6580	29.52	9.70	39.22	56.00	-16.78	QP
10	1.3380	12.98	9.65	22.63	46.00	-23.37	AVG
11	3.3540	2.17	9.63	11.80	46.00	-34.20	AVG
12	3.6860	23.20	9.65	32.85	56.00	-23.15	QP



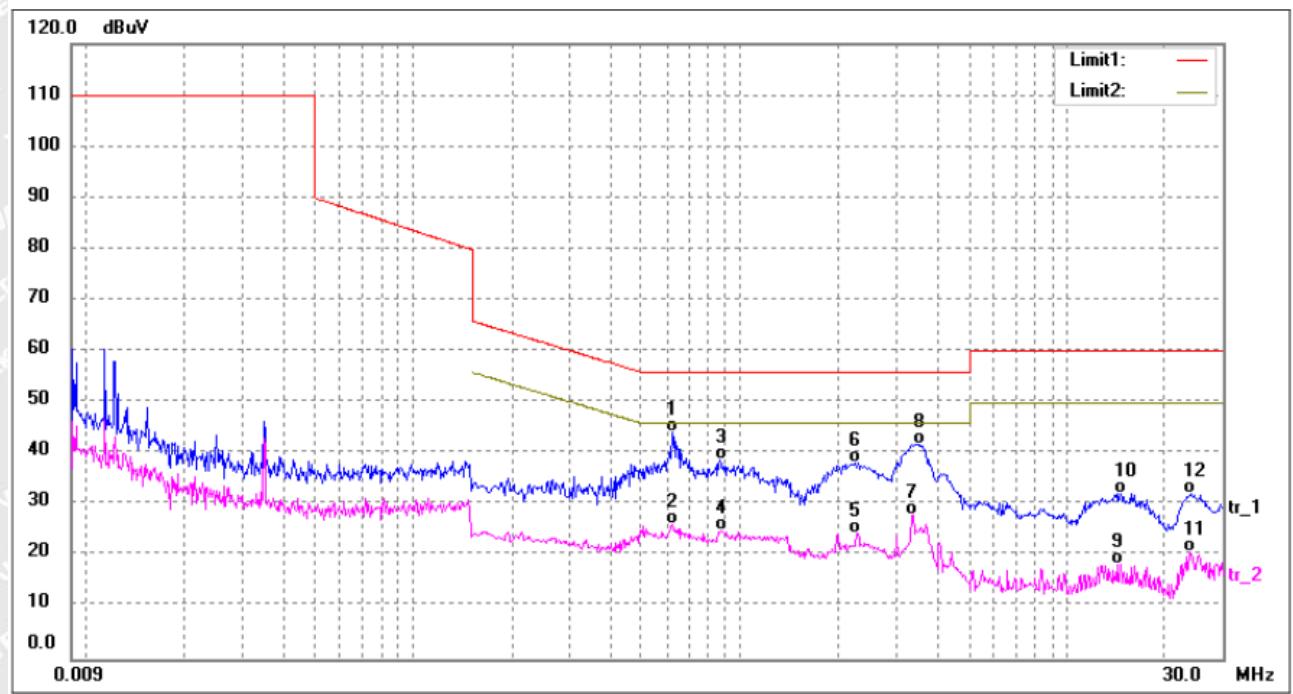
TM4 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.6220	34.63	9.71	44.34	56.00	-11.66	QP
2	0.6220	16.95	9.71	26.66	46.00	-19.34	AVG
3	0.9260	28.94	9.67	38.61	56.00	-17.39	QP
4	0.9260	14.72	9.67	24.39	46.00	-21.61	AVG
5	1.3380	14.94	9.65	24.59	46.00	-21.41	AVG
6	1.3700	27.59	9.65	37.24	56.00	-18.76	QP
7	2.1380	14.99	9.62	24.61	46.00	-21.39	AVG
8	2.2659	28.72	9.62	38.34	56.00	-17.66	QP
9	3.5180	32.48	9.65	42.13	56.00	-13.87	QP
10	3.5900	18.17	9.65	27.82	46.00	-18.18	AVG
11	14.4820	9.29	9.94	19.23	50.00	-30.77	AVG
12	15.9540	24.09	10.01	34.10	60.00	-25.90	QP



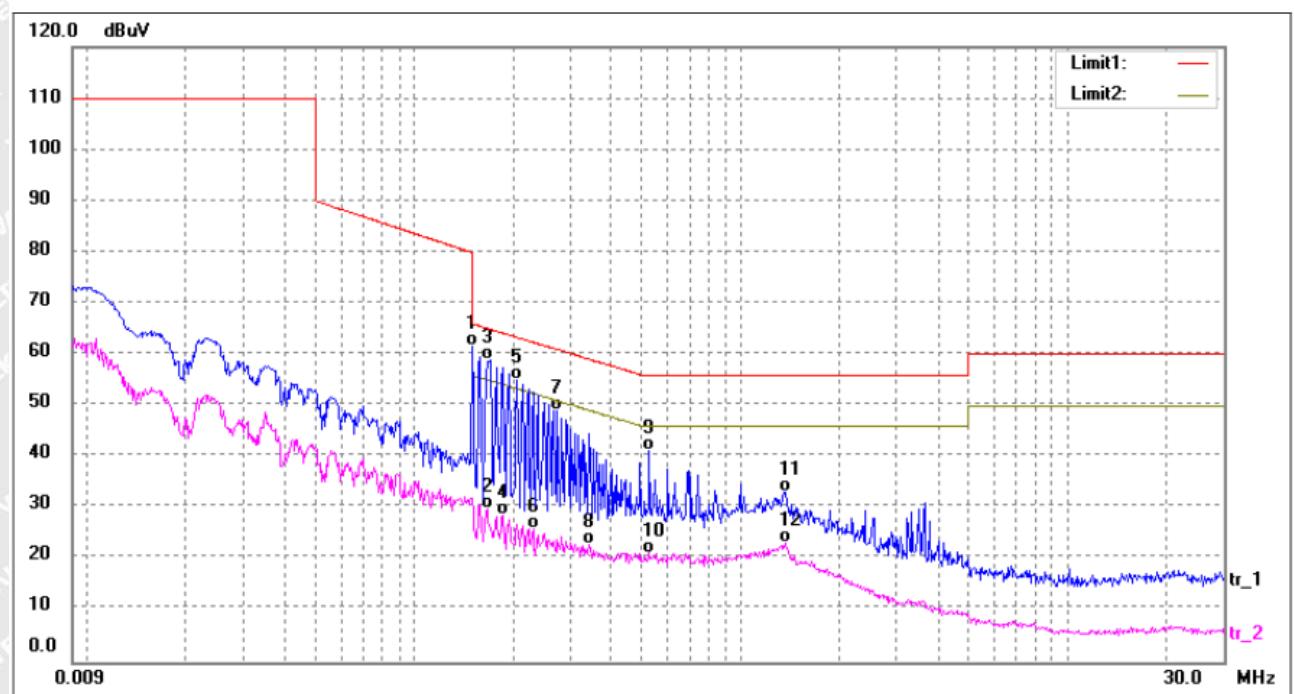
TM4 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.6220	34.63	9.71	44.34	56.00	-11.66	QP
2	0.6220	16.61	9.71	26.32	46.00	-19.68	AVG
3	0.8700	29.32	9.68	39.00	56.00	-17.00	QP
4	0.8860	15.34	9.68	25.02	46.00	-20.98	AVG
5	2.2860	14.86	9.62	24.48	46.00	-21.52	AVG
6	2.2940	28.59	9.62	38.21	56.00	-17.79	QP
7	3.4020	18.45	9.63	28.08	46.00	-17.92	AVG
8	3.5100	32.24	9.65	41.89	56.00	-14.11	QP
9	14.2740	8.45	9.94	18.39	50.00	-31.61	AVG
10	14.6340	22.36	9.94	32.30	60.00	-27.70	QP
11	23.7900	10.74	10.11	20.85	50.00	-29.15	AVG
12	24.0900	22.02	10.10	32.12	60.00	-27.88	QP



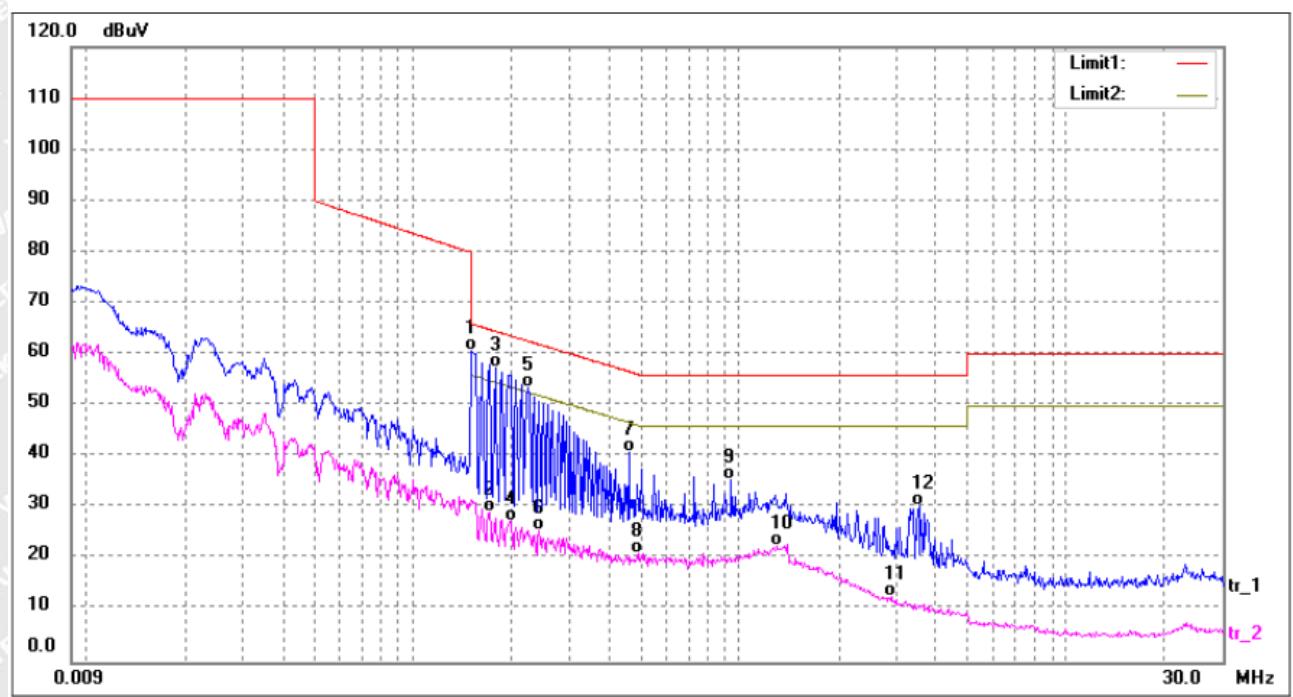
TM5 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	51.87	9.76	61.63	65.99	-4.36	QP
2	0.1660	20.19	9.70	29.89	55.15	-25.26	AVG
3	0.1700	49.14	9.68	58.82	64.96	-6.14	QP
4	0.1860	19.01	9.62	28.63	54.21	-25.58	AVG
5	0.2060	45.54	9.57	55.11	63.36	-8.25	QP
6	0.2300	16.41	9.59	26.00	52.45	-26.45	AVG
7	0.2740	39.47	9.62	49.09	60.99	-11.90	QP
8	0.3420	13.34	9.66	23.00	49.15	-26.15	AVG
9	0.5260	31.55	9.73	41.28	56.00	-14.72	QP
10	0.5260	11.57	9.73	21.30	46.00	-24.70	AVG
11	1.3740	23.58	9.65	33.23	56.00	-22.77	QP
12	1.3740	13.50	9.65	23.15	46.00	-22.85	AVG



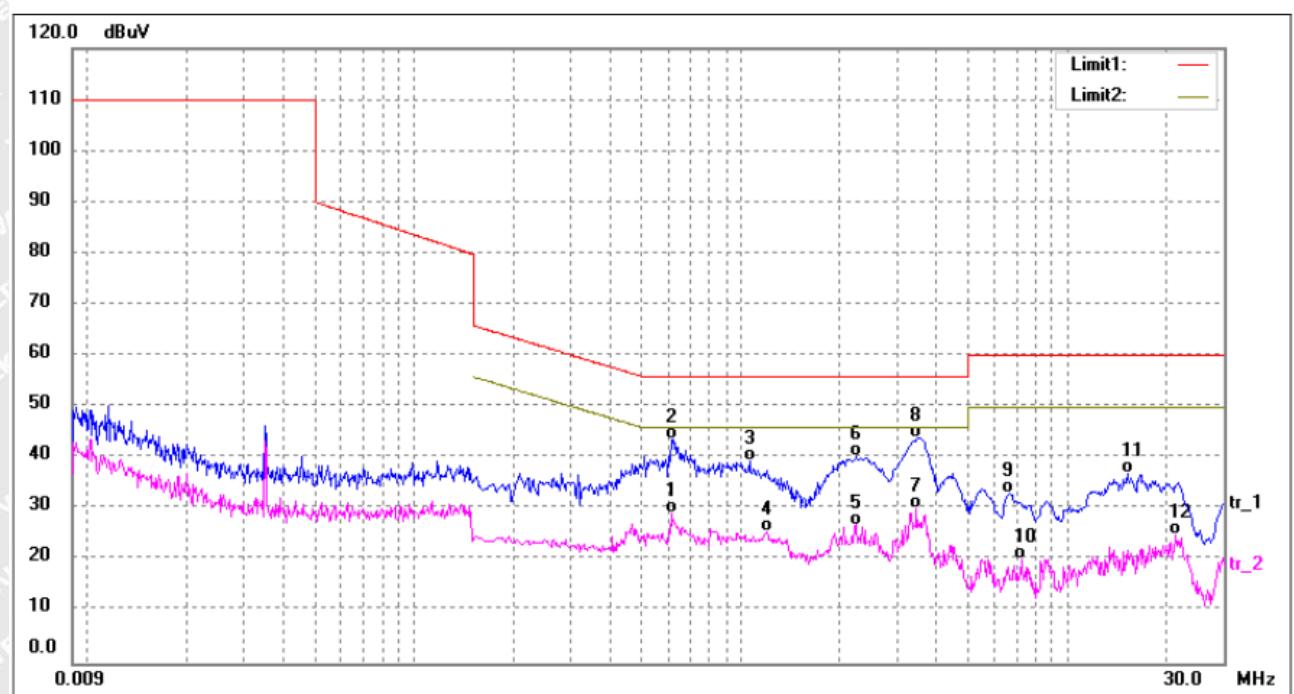
TM5 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	51.01	9.76	60.77	65.99	-5.22	QP
2	0.1700	19.68	9.68	29.36	54.96	-25.60	AVG
3	0.1780	47.77	9.65	57.42	64.57	-7.15	QP
4	0.1980	18.01	9.58	27.59	53.69	-26.10	AVG
5	0.2220	44.09	9.59	53.68	62.74	-9.06	QP
6	0.2420	16.14	9.60	25.74	52.02	-26.28	AVG
7	0.4580	31.20	9.72	40.92	56.73	-15.81	QP
8	0.4900	11.46	9.74	21.20	46.17	-24.97	AVG
9	0.9420	25.87	9.68	35.55	56.00	-20.45	QP
10	1.3020	13.06	9.65	22.71	46.00	-23.29	AVG
11	2.9100	3.12	9.62	12.74	46.00	-33.26	AVG
12	3.5500	20.86	9.65	30.51	56.00	-25.49	QP



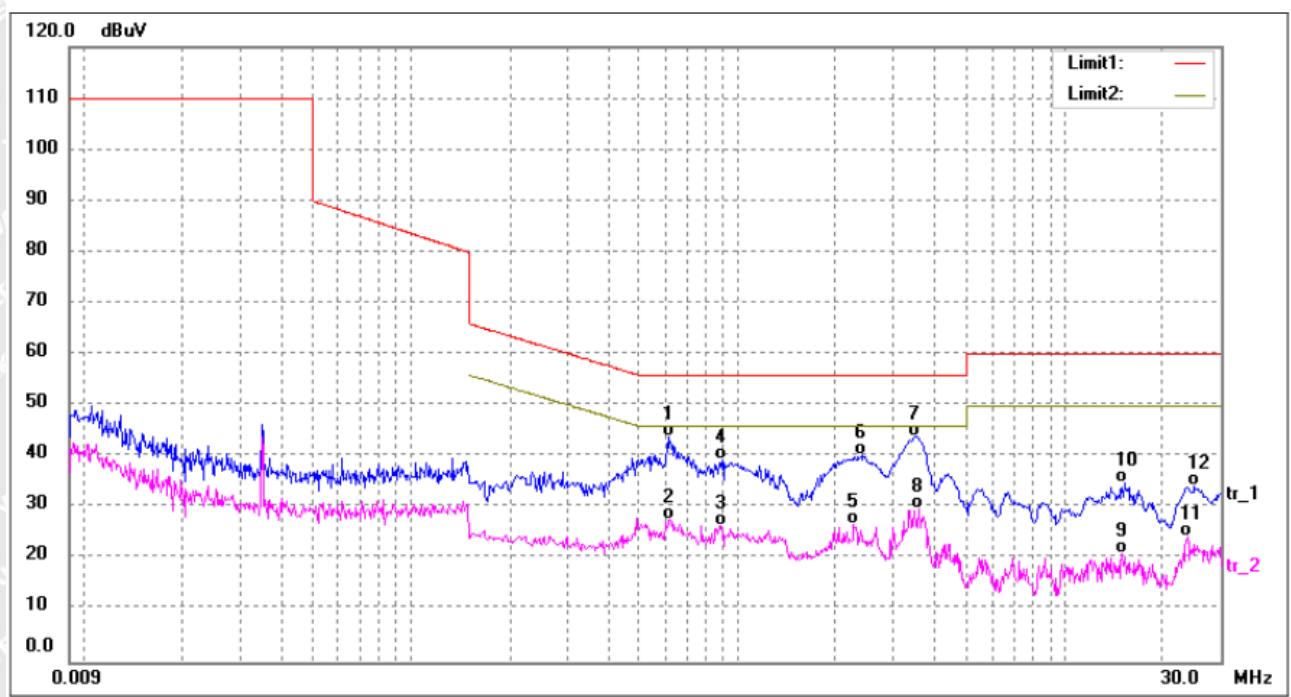
TM6 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.6140	19.51	9.71	29.22	46.00	-16.78	AVG
2	0.6220	33.97	9.71	43.68	56.00	-12.32	QP
3	1.0660	29.67	9.67	39.34	56.00	-16.66	QP
4	1.2059	15.98	9.66	25.64	46.00	-20.36	AVG
5	2.2380	17.38	9.62	27.00	46.00	-19.00	AVG
6	2.2580	30.63	9.62	40.25	56.00	-15.75	QP
7	3.4660	20.48	9.64	30.12	46.00	-15.88	AVG
8*	3.4860	34.39	9.64	44.03	56.00	-11.97	QP
9	6.6580	23.23	9.78	33.01	60.00	-26.99	QP
10	7.2460	10.52	9.79	20.31	50.00	-29.69	AVG
11	15.2660	26.97	9.96	36.93	60.00	-23.07	QP
12	21.4860	14.77	10.19	24.96	50.00	-25.04	AVG



TM6 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.6180	34.24	9.71	43.95	56.00	-12.05	QP
2	0.6180	18.12	9.71	27.83	46.00	-18.17	AVG
3	0.8940	16.87	9.67	26.54	46.00	-19.46	AVG
4	0.8980	29.86	9.67	39.53	56.00	-16.47	QP
5	2.2700	17.20	9.62	26.82	46.00	-19.18	AVG
6	2.3900	30.71	9.62	40.33	56.00	-15.67	QP
7*	3.4940	34.40	9.64	44.04	56.00	-11.96	QP
8	3.6020	20.11	9.65	29.76	46.00	-16.24	AVG
9	14.9540	11.19	9.95	21.14	50.00	-28.86	AVG
10	15.1820	24.99	9.96	34.95	60.00	-25.05	QP
11	23.7220	14.30	10.12	24.42	50.00	-25.58	AVG
12	25.0540	24.13	10.08	34.21	60.00	-25.79	QP

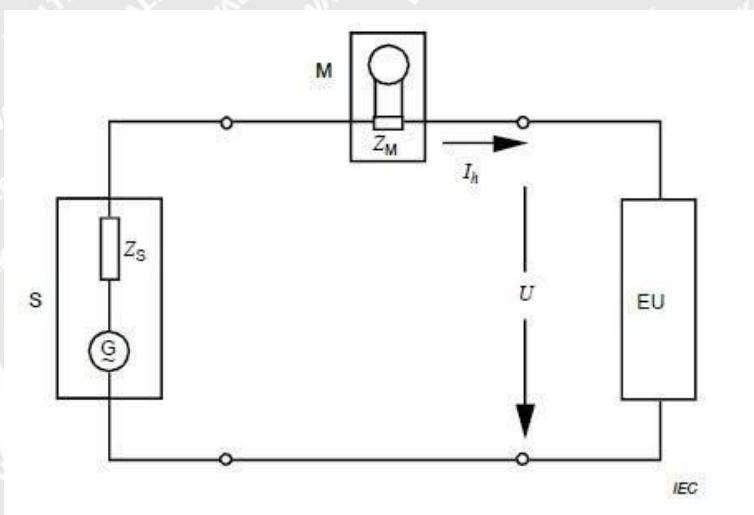
3.2 Low-frequency emission - Harmonic distortion

Test Requirement:	AS 60669.2.1 Clause 26.2.1
Test Limit:	IEC 61000-3-2 Clause 7
Test Method:	IEC 61000-3-2 Cause 6

3.2.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	53 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM3, TM5

3.2.2 Basic Test Setup Block Diagram



3.2.3 Summary of Test Results



Harmonics – Class-A per IEC 61000-3-2:2018+AMD1:2020(Run time)

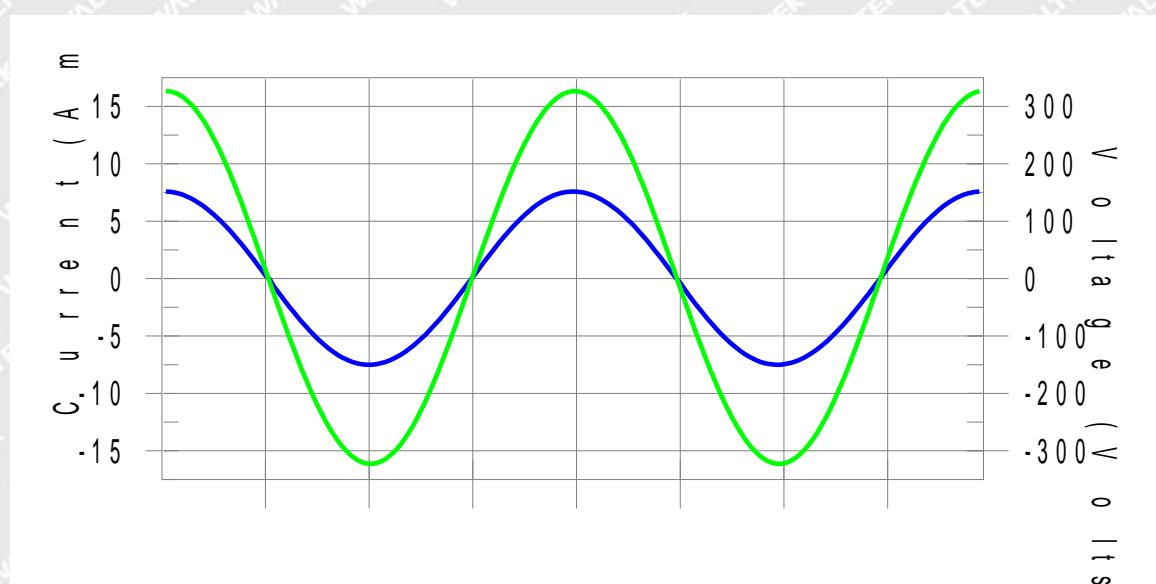
Comment: TM1

Customer: Customer information

Test Result: Pass

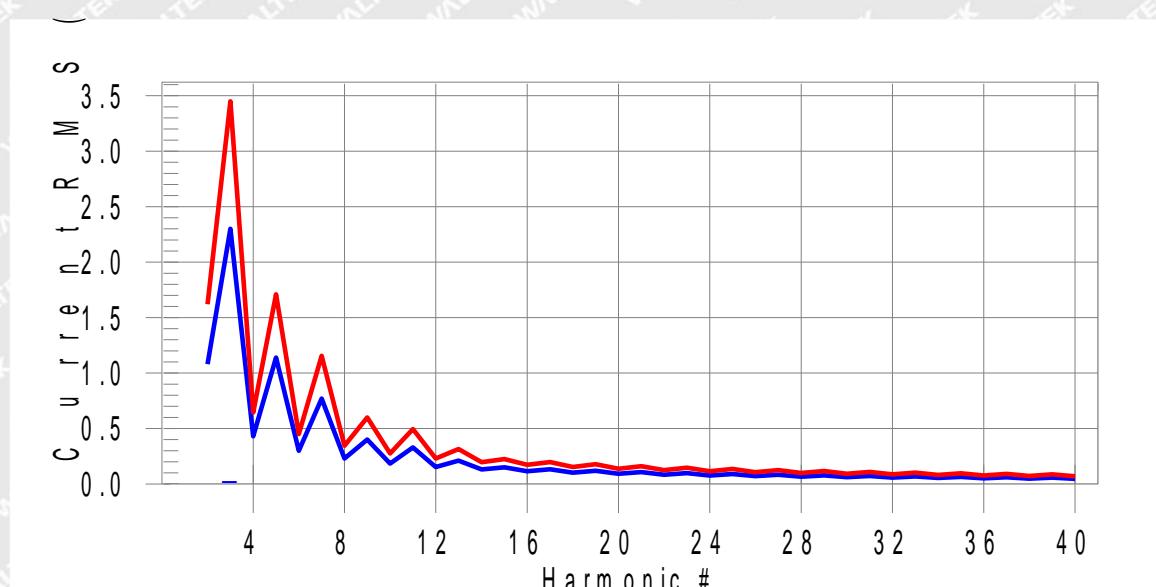
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass

Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit



Current Test Result Summary (Run time)

Comment: TM1

Customer: Customer information

Test Result: Pass

Source qualification: Normal

THC(A): 0.021

I-THD(%): 0.4

POHC(A): 0.005

POHC Limit(A): 0.251

Highest parameter values during test:

V_RMS (Volts):	229.80	Frequency(Hz):	50.00
I_Peak (Amps):	7.604	I_RMS (Amps):	5.337
I_Fund (Amps):	5.335	Crest Factor:	1.425
Power (Watts):	1225.9	Power Factor:	1.000

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.002	1.620	N/A	Pass
3	0.018	2.300	N/A	0.019	3.450	N/A	Pass
4	0.001	0.430	N/A	0.002	0.645	N/A	Pass
5	0.001	1.140	N/A	0.001	1.710	N/A	Pass
6	0.002	0.300	N/A	0.002	0.450	N/A	Pass
7	0.002	0.770	N/A	0.003	1.155	N/A	Pass
8	0.002	0.230	N/A	0.002	0.345	N/A	Pass
9	0.002	0.400	N/A	0.002	0.600	N/A	Pass
10	0.002	0.184	N/A	0.002	0.276	N/A	Pass
11	0.001	0.330	N/A	0.002	0.495	N/A	Pass
12	0.001	0.153	N/A	0.002	0.230	N/A	Pass
13	0.002	0.210	N/A	0.002	0.315	N/A	Pass
14	0.002	0.131	N/A	0.002	0.197	N/A	Pass
15	0.002	0.150	N/A	0.002	0.225	N/A	Pass
16	0.002	0.115	N/A	0.002	0.173	N/A	Pass
17	0.002	0.132	N/A	0.002	0.198	N/A	Pass
18	0.002	0.102	N/A	0.002	0.153	N/A	Pass
19	0.002	0.118	N/A	0.002	0.178	N/A	Pass
20	0.002	0.092	N/A	0.002	0.138	N/A	Pass
21	0.002	0.107	N/A	0.002	0.161	N/A	Pass
22	0.002	0.084	N/A	0.002	0.125	N/A	Pass
23	0.002	0.098	N/A	0.002	0.147	N/A	Pass
24	0.002	0.077	N/A	0.002	0.115	N/A	Pass
25	0.002	0.090	N/A	0.002	0.135	N/A	Pass
26	0.002	0.071	N/A	0.002	0.107	N/A	Pass
27	0.002	0.083	N/A	0.002	0.125	N/A	Pass
28	0.002	0.066	N/A	0.002	0.099	N/A	Pass



Reference No.: WTX24X10240801E

29	0.001	0.078	N/A	0.002	0.116	N/A	Pass
30	0.002	0.061	N/A	0.002	0.092	N/A	Pass
31	0.002	0.073	N/A	0.002	0.109	N/A	Pass
32	0.002	0.058	N/A	0.002	0.086	N/A	Pass
33	0.002	0.068	N/A	0.002	0.102	N/A	Pass
34	0.002	0.054	N/A	0.002	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.001	0.051	N/A	0.002	0.077	N/A	Pass
37	0.001	0.061	N/A	0.001	0.091	N/A	Pass
38	0.001	0.048	N/A	0.002	0.073	N/A	Pass
39	0.002	0.058	N/A	0.002	0.087	N/A	Pass
40	0.001	0.046	N/A	0.002	0.069	N/A	Pass

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Voltage Source Verification Data (Run time)

Comment: TM1

Customer: Customer information

Test Result: Pass **Source qualification:** Normal

Highest parameter values during test:

Voltage (Vrms):	229.80	Frequency(Hz):	50.00
I_Peak (Amps):	7.604	I_RMS (Amps):	5.337
I_Fund (Amps):	5.335	Crest Factor:	1.425
Power (Watts):	1225.9	Power Factor:	1.000

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.066	0.460	14.26	OK
3	0.574	2.068	27.74	OK
4	0.065	0.459	14.24	OK
5	0.113	0.919	12.27	OK
6	0.049	0.459	10.73	OK
7	0.051	0.689	7.43	OK
8	0.027	0.459	5.83	OK
9	0.026	0.460	5.59	OK
10	0.017	0.460	3.68	OK
11	0.019	0.230	8.46	OK
12	0.014	0.230	5.97	OK
13	0.012	0.230	5.12	OK
14	0.012	0.230	5.14	OK
15	0.018	0.230	7.83	OK
16	0.010	0.230	4.28	OK
17	0.013	0.230	5.55	OK
18	0.014	0.230	6.04	OK
19	0.011	0.230	4.92	OK
20	0.014	0.230	6.29	OK
21	0.008	0.230	3.57	OK
22	0.004	0.230	1.84	OK
23	0.005	0.230	2.19	OK
24	0.008	0.230	3.55	OK
25	0.006	0.230	2.70	OK
26	0.005	0.230	2.05	OK
27	0.006	0.230	2.76	OK
28	0.005	0.230	1.99	OK
29	0.007	0.230	3.21	OK



30	0.003	0.230	1.51	OK
31	0.006	0.230	2.49	OK
32	0.004	0.230	1.55	OK
33	0.007	0.230	2.88	OK
34	0.005	0.230	2.03	OK
35	0.004	0.230	1.70	OK
36	0.003	0.230	1.15	OK
37	0.006	0.230	2.40	OK
38	0.003	0.230	1.19	OK
39	0.006	0.230	2.60	OK
40	0.010	0.230	4.19	OK

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Harmonics – Class-A per IEC 61000-3-2:2018+AMD1:2020(Run time)

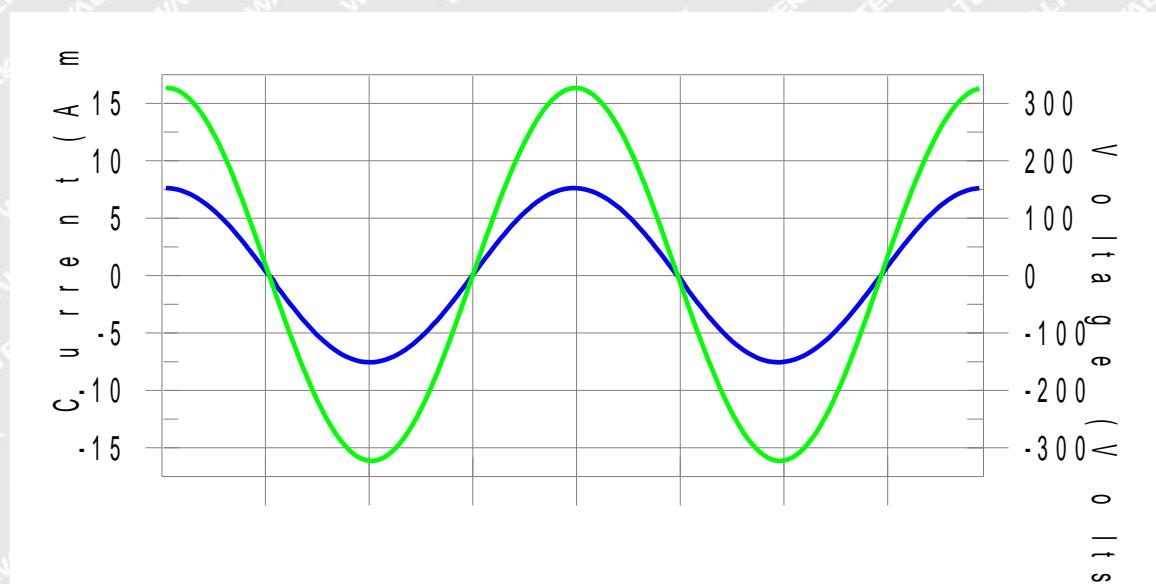
Comment: TM3

Customer: Customer information

Test Result: Pass

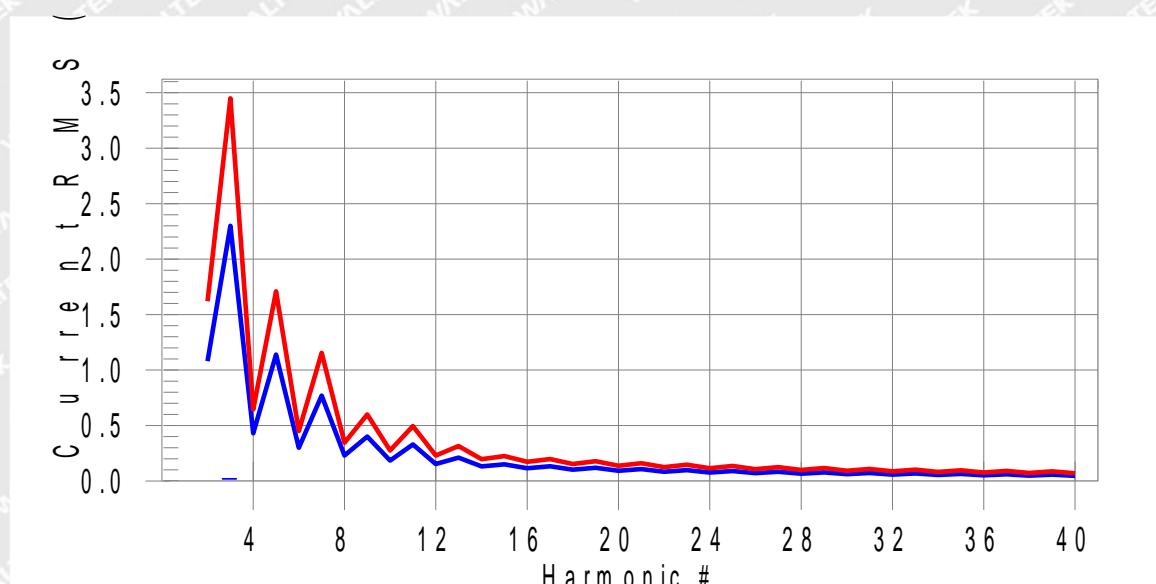
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass

Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit



Current Test Result Summary (Run time)

Comment: TM3

Customer: Customer information

Test Result: Pass

Source qualification: Normal

THC(A): 0.025

I-THD(%): 0.5

POHC(A): 0.007

POHC Limit(A): 0.251

Highest parameter values during test:

V_RMS (Volts):	229.79	Frequency(Hz):	50.00
I_Peak (Amps):	7.641	I_RMS (Amps):	5.369
I_Fund (Amps):	5.368	Crest Factor:	1.424
Power (Watts):	1233.4	Power Factor:	1.000

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.003	1.080	N/A	0.004	1.620	N/A	Pass
3	0.020	2.300	N/A	0.021	3.450	N/A	Pass
4	0.003	0.430	N/A	0.004	0.645	N/A	Pass
5	0.001	1.140	N/A	0.001	1.710	N/A	Pass
6	0.003	0.300	N/A	0.003	0.450	N/A	Pass
7	0.004	0.770	N/A	0.004	1.155	N/A	Pass
8	0.003	0.230	N/A	0.003	0.345	N/A	Pass
9	0.003	0.400	N/A	0.003	0.600	N/A	Pass
10	0.003	0.184	N/A	0.003	0.276	N/A	Pass
11	0.003	0.330	N/A	0.003	0.495	N/A	Pass
12	0.003	0.153	N/A	0.003	0.230	N/A	Pass
13	0.003	0.210	N/A	0.003	0.315	N/A	Pass
14	0.003	0.131	N/A	0.003	0.197	N/A	Pass
15	0.003	0.150	N/A	0.003	0.225	N/A	Pass
16	0.003	0.115	N/A	0.003	0.173	N/A	Pass
17	0.003	0.132	N/A	0.003	0.198	N/A	Pass
18	0.003	0.102	N/A	0.003	0.153	N/A	Pass
19	0.003	0.118	N/A	0.003	0.178	N/A	Pass
20	0.003	0.092	N/A	0.003	0.138	N/A	Pass
21	0.003	0.107	N/A	0.003	0.161	N/A	Pass
22	0.003	0.084	N/A	0.003	0.125	N/A	Pass
23	0.003	0.098	N/A	0.003	0.147	N/A	Pass
24	0.003	0.077	N/A	0.003	0.115	N/A	Pass
25	0.003	0.090	N/A	0.003	0.135	N/A	Pass
26	0.002	0.071	N/A	0.003	0.107	N/A	Pass
27	0.002	0.083	N/A	0.002	0.125	N/A	Pass
28	0.002	0.066	N/A	0.002	0.099	N/A	Pass



29	0.002	0.078	N/A	0.002	0.116	N/A	Pass
30	0.002	0.061	N/A	0.002	0.092	N/A	Pass
31	0.002	0.073	N/A	0.002	0.109	N/A	Pass
32	0.002	0.058	N/A	0.002	0.086	N/A	Pass
33	0.002	0.068	N/A	0.002	0.102	N/A	Pass
34	0.002	0.054	N/A	0.002	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.002	0.051	N/A	0.002	0.077	N/A	Pass
37	0.002	0.061	N/A	0.002	0.091	N/A	Pass
38	0.002	0.048	N/A	0.002	0.073	N/A	Pass
39	0.002	0.058	N/A	0.002	0.087	N/A	Pass
40	0.002	0.046	N/A	0.002	0.069	N/A	Pass

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Voltage Source Verification Data (Run time)

Comment: TM3

Customer: Customer information

Test Result: Pass Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	229.79	Frequency(Hz):	50.00
I_Peak (Amps):	7.641	I_RMS (Amps):	5.369
I_Fund (Amps):	5.368	Crest Factor:	1.424
Power (Watts):	1233.4	Power Factor:	1.000

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.066	0.459	14.45	OK
3	0.569	2.068	27.50	OK
4	0.064	0.460	14.03	OK
5	0.115	0.919	12.49	OK
6	0.048	0.459	10.52	OK
7	0.048	0.689	6.98	OK
8	0.030	0.460	6.44	OK
9	0.025	0.460	5.44	OK
10	0.016	0.459	3.38	OK
11	0.018	0.230	7.79	OK
12	0.013	0.230	5.55	OK
13	0.011	0.230	4.63	OK
14	0.012	0.230	5.31	OK
15	0.017	0.230	7.30	OK
16	0.010	0.230	4.28	OK
17	0.012	0.230	5.23	OK
18	0.013	0.230	5.50	OK
19	0.012	0.230	5.19	OK
20	0.014	0.230	5.93	OK
21	0.008	0.230	3.66	OK
22	0.003	0.230	1.44	OK
23	0.004	0.230	1.82	OK
24	0.009	0.230	3.71	OK
25	0.006	0.230	2.60	OK
26	0.005	0.230	2.11	OK
27	0.007	0.230	3.16	OK
28	0.005	0.230	2.00	OK
29	0.009	0.230	3.80	OK



30	0.004	0.230	1.87	OK
31	0.006	0.230	2.50	OK
32	0.004	0.230	1.77	OK
33	0.007	0.230	3.26	OK
34	0.004	0.230	1.95	OK
35	0.004	0.230	1.82	OK
36	0.004	0.230	1.68	OK
37	0.006	0.230	2.73	OK
38	0.004	0.230	1.55	OK
39	0.005	0.230	2.09	OK
40	0.010	0.230	4.30	OK

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Harmonics – Class-A per IEC 61000-3-2:2018+AMD1:2020(Run time)

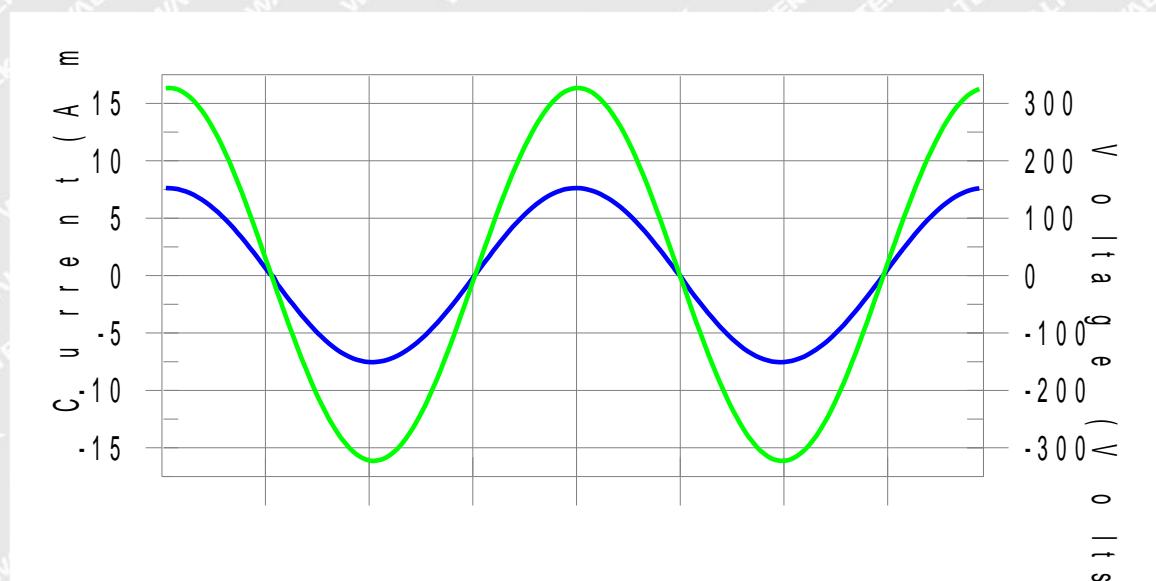
Comment: TM5

Customer: Customer information

Test Result: Pass

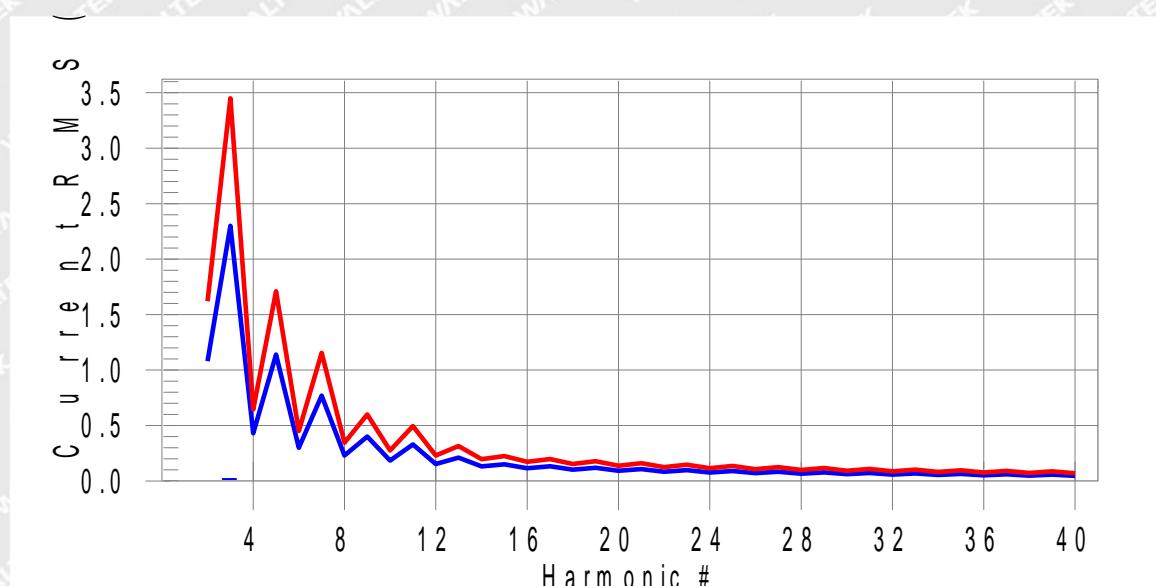
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass

Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit



Current Test Result Summary (Run time)

Comment: TM5

Customer: Customer information

Test Result: Pass

Source qualification: Normal

THC(A): 0.022

I-THD(%): 0.4

POHC(A): 0.006

POHC Limit(A): 0.251

Highest parameter values during test:

V_RMS (Volts):	229.79	Frequency(Hz):	50.00
I_Peak (Amps):	7.641	I_RMS (Amps):	5.364
I_Fund (Amps):	5.360	Crest Factor:	1.425
Power (Watts):	1232.2	Power Factor:	1.000

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.003	1.620	N/A	Pass
3	0.019	2.300	N/A	0.020	3.450	N/A	Pass
4	0.002	0.430	N/A	0.003	0.645	N/A	Pass
5	0.001	1.140	N/A	0.001	1.710	N/A	Pass
6	0.002	0.300	N/A	0.002	0.450	N/A	Pass
7	0.003	0.770	N/A	0.003	1.155	N/A	Pass
8	0.002	0.230	N/A	0.002	0.345	N/A	Pass
9	0.002	0.400	N/A	0.002	0.600	N/A	Pass
10	0.002	0.184	N/A	0.002	0.276	N/A	Pass
11	0.002	0.330	N/A	0.002	0.495	N/A	Pass
12	0.002	0.153	N/A	0.002	0.230	N/A	Pass
13	0.002	0.210	N/A	0.002	0.315	N/A	Pass
14	0.002	0.131	N/A	0.002	0.197	N/A	Pass
15	0.002	0.150	N/A	0.002	0.225	N/A	Pass
16	0.002	0.115	N/A	0.002	0.173	N/A	Pass
17	0.002	0.132	N/A	0.002	0.198	N/A	Pass
18	0.002	0.102	N/A	0.002	0.153	N/A	Pass
19	0.002	0.118	N/A	0.002	0.178	N/A	Pass
20	0.002	0.092	N/A	0.002	0.138	N/A	Pass
21	0.002	0.107	N/A	0.002	0.161	N/A	Pass
22	0.002	0.084	N/A	0.002	0.125	N/A	Pass
23	0.002	0.098	N/A	0.002	0.147	N/A	Pass
24	0.002	0.077	N/A	0.002	0.115	N/A	Pass
25	0.002	0.090	N/A	0.002	0.135	N/A	Pass
26	0.002	0.071	N/A	0.002	0.107	N/A	Pass
27	0.002	0.083	N/A	0.002	0.125	N/A	Pass
28	0.002	0.066	N/A	0.002	0.099	N/A	Pass



29	0.002	0.078	N/A	0.002	0.116	N/A	Pass
30	0.002	0.061	N/A	0.002	0.092	N/A	Pass
31	0.002	0.073	N/A	0.002	0.109	N/A	Pass
32	0.002	0.058	N/A	0.002	0.086	N/A	Pass
33	0.002	0.068	N/A	0.002	0.102	N/A	Pass
34	0.002	0.054	N/A	0.002	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.002	0.051	N/A	0.002	0.077	N/A	Pass
37	0.002	0.061	N/A	0.002	0.091	N/A	Pass
38	0.002	0.048	N/A	0.002	0.073	N/A	Pass
39	0.002	0.058	N/A	0.002	0.087	N/A	Pass
40	0.002	0.046	N/A	0.002	0.069	N/A	Pass

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Voltage Source Verification Data (Run time)

Comment: TM5

Customer: Customer information

Test Result: Pass **Source qualification:** Normal

Highest parameter values during test:

Voltage (Vrms):	229.79	Frequency(Hz):	50.00
I_Peak (Amps):	7.641	I_RMS (Amps):	5.364
I_Fund (Amps):	5.360	Crest Factor:	1.425
Power (Watts):	1232.2	Power Factor:	1.000

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.061	0.459	13.19	OK
3	0.572	2.068	27.64	OK
4	0.062	0.460	13.52	OK
5	0.115	0.919	12.51	OK
6	0.050	0.459	10.92	OK
7	0.052	0.689	7.57	OK
8	0.030	0.460	6.44	OK
9	0.028	0.459	6.03	OK
10	0.016	0.459	3.48	OK
11	0.017	0.230	7.31	OK
12	0.012	0.230	5.01	OK
13	0.011	0.230	4.95	OK
14	0.011	0.230	4.97	OK
15	0.019	0.230	8.48	OK
16	0.011	0.230	4.67	OK
17	0.013	0.230	5.53	OK
18	0.013	0.230	5.81	OK
19	0.013	0.230	5.79	OK
20	0.015	0.230	6.72	OK
21	0.008	0.230	3.59	OK
22	0.004	0.230	1.79	OK
23	0.005	0.230	2.10	OK
24	0.008	0.230	3.31	OK
25	0.006	0.230	2.77	OK
26	0.006	0.230	2.52	OK
27	0.007	0.230	2.88	OK
28	0.005	0.230	2.10	OK
29	0.008	0.230	3.63	OK



30	0.004	0.230	1.60	OK
31	0.006	0.230	2.45	OK
32	0.004	0.230	1.64	OK
33	0.007	0.230	2.87	OK
34	0.005	0.230	2.22	OK
35	0.004	0.230	1.64	OK
36	0.003	0.230	1.42	OK
37	0.006	0.230	2.56	OK
38	0.003	0.230	1.27	OK
39	0.006	0.230	2.72	OK
40	0.011	0.230	4.77	OK

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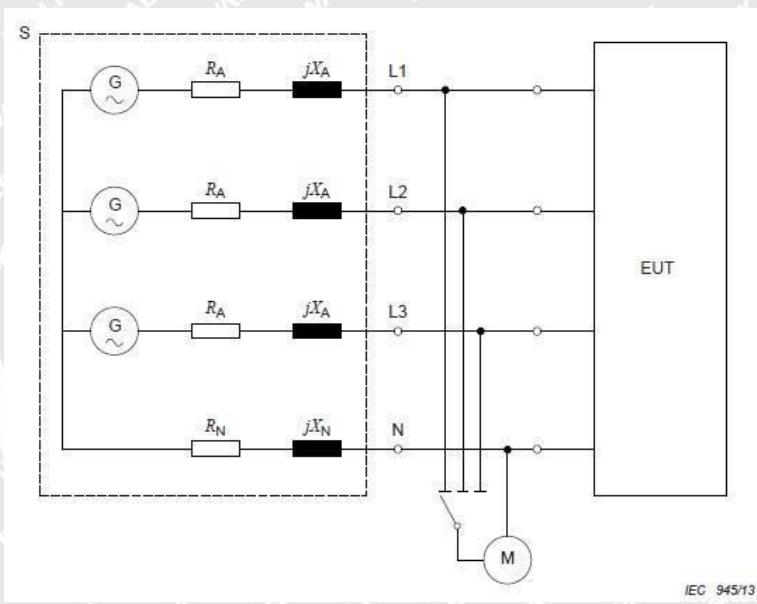
3.3 Low-frequency emission - Voltage fluctuations and flicker

Test Requirement:	AS 60669.2.1 Clause 26.2.1
Test Limit:	IEC 61000-3-3 Clause 5
Test Method:	IEC 61000-3-3 Clause 6

3.3.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	53 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM3, TM5

3.3.2 Basic Test Setup Block Diagram



IEC 945/13

3.3.3 Summary of Test Results



Flicker Test Summary per IEC61000-3-3:2013+AMD2:2021 (Run time)

Comment: TM1

Customer: Customer information

Test Result: Pass

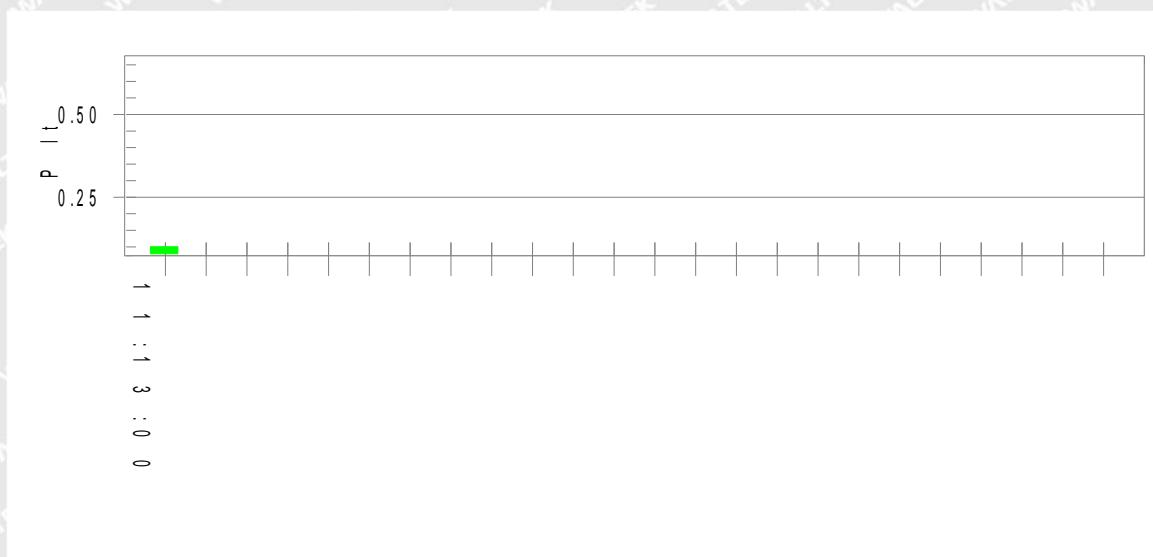
Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 227.65

T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.230	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.101	Test limit:	0.650	Pass



Flicker Test Summary per IEC61000-3-3:2013+AMD2:2021 (Run time)

Comment: TM3

Customer: Customer information

Test Result: Pass

Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 227.58

T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.230	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.101	Test limit:	0.650	Pass



Flicker Test Summary per IEC61000-3-3:2013+AMD2:2021 (Run time)

Comment: TM5

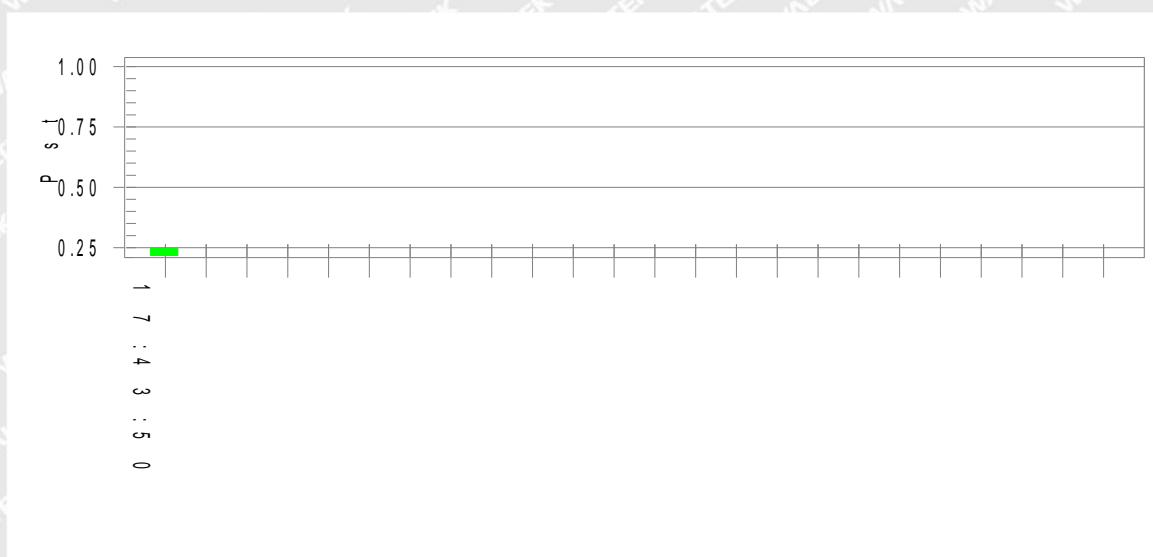
Customer: Customer information

Test Result: Pass

Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 227.54

T-max (mS):	0	Test limit (mS):	500.0	Pass
-------------	---	------------------	-------	------

Highest dc (%):	0.00	Test limit (%):	3.30	Pass
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Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
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Highest Pst (10 min. period):	0.247	Test limit:	1.000	Pass
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Highest Plt (2 hr. period):	0.108	Test limit:	0.650	Pass
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4. Immunity Test Results (EMS)

Performance Criteria Description in AS 60669.2.1

Performance criteria

During the test, the electronic switch is not operated.

Replace the first three existing paragraphs after Table 105 by the following new paragraphs:

During the test, the state and setting of the electronic switch may alter, flickering is neglected.

After the test, the electronic switch shall be in the original state and setting and shall operate as intended.

During the test, the state and setting of the electronic control device may alter, flickering is neglected.

After the test, the electronic control device shall be in the original state and setting and shall operate as intended.

During the test, the state and setting of the electronic switch may alter, flickering caused by the electronic switch is allowed.

After the test, the electronic switch shall be in the original state and setting and shall operate as intended.

During the test, the state and setting of the electronic switch may alter, flickering is neglected.

After the test, the electronic switch shall be in the original state and setting and shall operate as intended.

During the test, the electronic switch is operated, if it contains automatic functions or can be remotely controlled.

During and after the test, the electronic switch shall operate as intended, flickering is not allowed.

Flickering of lamps or irregular running of motors due to switching transients caused by frequency changes of the test equipment during the test procedure is neglected.

After the test, the general purpose electronic switch with included automatic functions shall operate as intended.

During the test, the electronic switch is operated, if it contains automatic functions or can be remotely controlled.

During and after the test, the electronic switch shall operate as intended, flickering is not allowed.

Flickering of lamps or irregular running of motors due to switching transients caused by frequency changes of



the test equipment during the test procedure is neglected.

After the test, the general purpose electronic switch with included automatic functions shall operate as intended.

During the test, the electronic switch is operated, if it contains automatic functions or can be remotely controlled.

During and after the test, the electronic switch shall operate as intended, flickering is not allowed.

Flickering of lamps or irregular running of motors due to switching transients caused by frequency changes of the test equipment during the test procedure is neglected.

After the test, the general purpose electronic switch with included automatic functions shall operate as intended.

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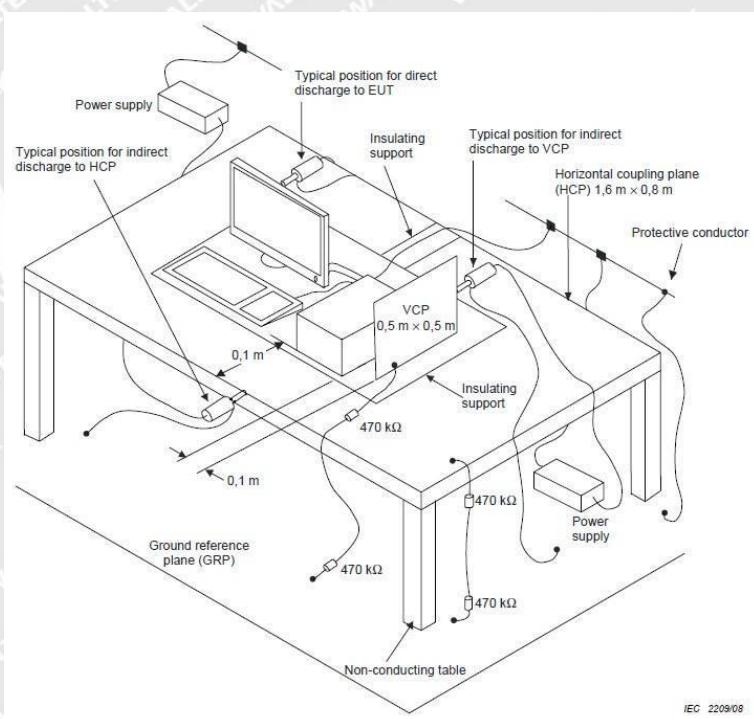
4.1 Electrostatic discharge test

Test Requirement:	AS 60669.2.1 Clause 26.1.4
Test Method:	IEC 61000-4-2
Procedure:	Discharge Impedance: $330\Omega/150\text{pF}$ Number of Discharge: Minimum 10 times at each test point Discharge Mode: Single Discharge Discharge Period: 1 second minimum
Performance Criteria:	B

4.1.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	54 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM2, TM3, TM4, TM5, TM6

4.1.2 Basic Test Setup Block Diagram





4.1.3 Summary of Test Results

Discharge type	Volt (kV)	Polarity	Test Point	Result/ Observations
Air discharge	8	+	1	A
Air discharge	8	-	1	A
Contact discharge	4	+	2	A
Contact discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

A: No degradation in the performance of the EUT was observed.



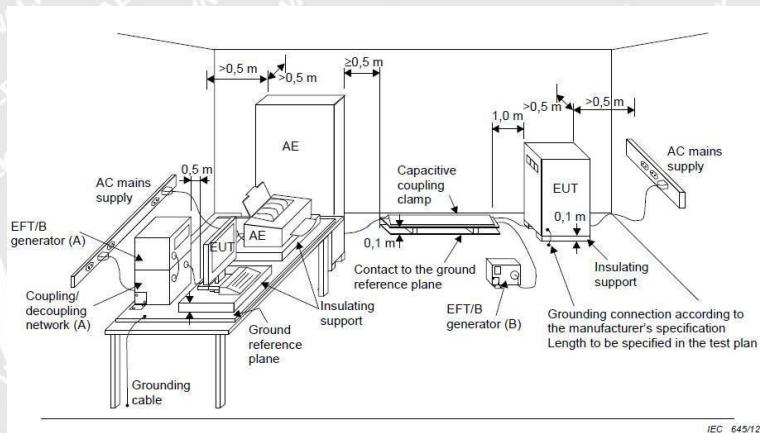
4.2 Electrical fast transient/burst test (Supply terminals)

Test Requirement:	AS 60669.2.1 Clause 26.1.3
Test Method:	IEC 61000-4-4
Procedure:	Repetition Frequency: 5kHz Burst Period: 300ms
Performance Criteria:	B

4.2.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	53 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM2, TM3, TM4, TM5, TM6

4.2.2 Basic Test Setup Block Diagram



4.2.3 Summary of Test Results

Port	Volt (kV)	Polarity	CDN/ Clamp	Result/ Observations
Supply terminals	1	+	CDN	A
Supply terminals	1	-	CDN	A

A: No degradation in the performance of the EUT was observed.



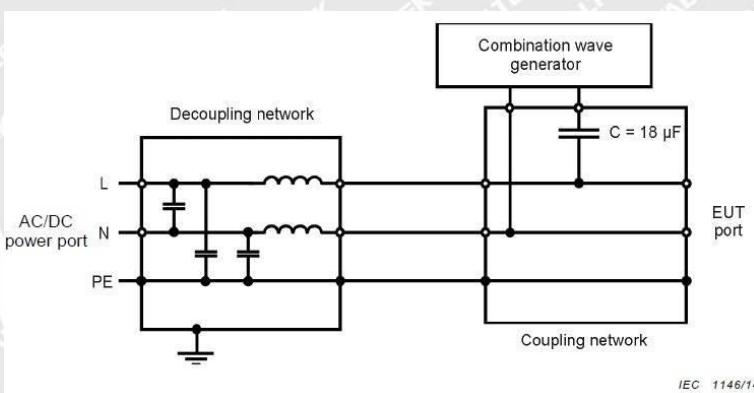
4.3 Surge immunity test for 1,2/50 wave impulses (Mains terminals)

Test Requirement:	AS 60669.2.1 Clause 26.1.2
Test Method:	IEC 61000-4-5
Procedure:	Two positive discharges and two negative discharges at each of the following angles 0°, 90°, 180° and 270°, at a repetition rate of (60 ± 5) s with an open-circuit test voltage. A test with lower voltages is not required.
Performance Criteria:	B

4.3.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	53 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM2, TM3, TM4, TM5, TM6

4.3.2 Basic Test Setup Block Diagram



4.3.3 Summary of Test Results

Port	Volt (kV)	Polarity	Phase(degree)	Result/ Observations
L-N	1	+	0°	A
L-N	1	-	0°	A
L-N	1	+	90°	A
L-N	1	-	90°	A
L-N	1	+	180°	A
L-N	1	-	180°	A
L-N	1	+	270°	A
L-N	1	-	270°	A

A: No degradation in the performance of the EUT was observed.



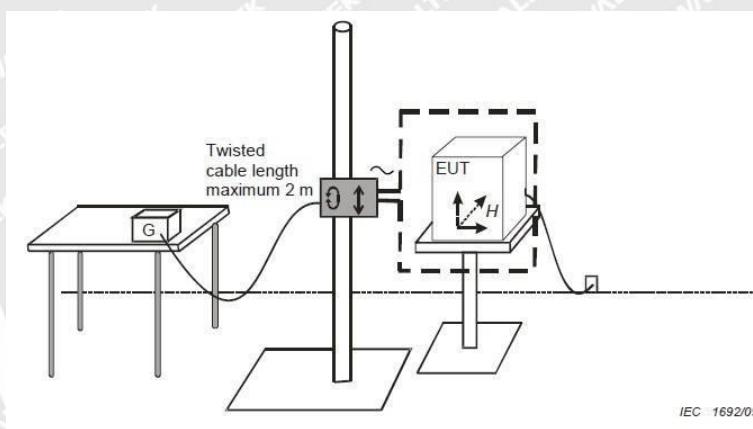
4.4 Power-frequency magnetic field test

Test Requirement:	AS 60669.2.1 Clause 26.1.7
Test Method:	IEC 61000-4-8
Procedure:	50Hz, 3A/m
Performance Criteria:	A

4.4.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	54 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM2, TM3, TM4, TM5, TM6

4.4.2 Basic Test Setup Block Diagram



IEC 1692/09

4.4.3 Summary of Test Results

Frequency	Strength (A/m)	Axial	Magnetic Field Type	Result/ Observations
50Hz	3	X	Continuous filed	A
50Hz	3	Y	Continuous filed	A
50Hz	3	Z	Continuous filed	A

A: No degradation in the performance of the EUT was observed.



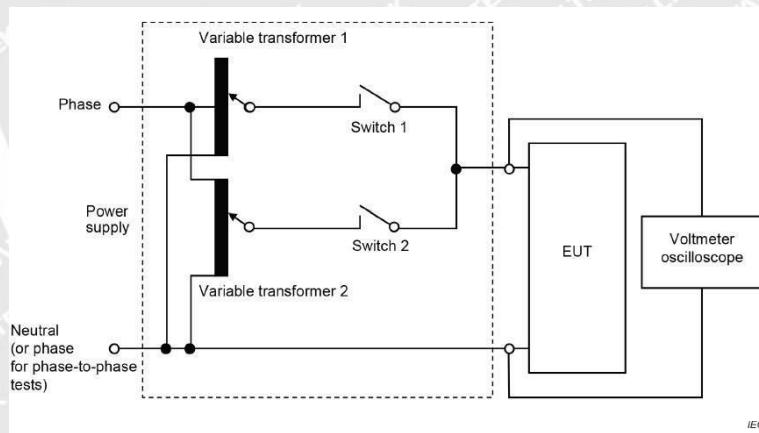
4.5 Voltage dips and short interruptions

Test Requirement:	AS 60669.2.1 Clause 26.1.1
Test Method:	IEC 61000-4-11
Procedure:	0% of UT for 10 Cycle 40% of UT for 10 Cycle 70% of UT for 10 Cycle No. of Dips / Interruptions: 3 per Level Time between dropout 10s
Performance Criteria:	C

4.5.1 E.U.T. Operation

Environmental Conditions	
Temperature:	23.5 °C
Relative Humidity:	53 %
Atmospheric Pressure:	99.8 kPa
Test mode:	TM1, TM2, TM3, TM4, TM5, TM6

4.5.2 Basic Test Setup Block Diagram



4.5.3 Summary of Test Results

Level %UT	Phase (degree)	Duration	No. of Dips/ Interruptions	Result/ Observations
0	0°	10 Cycles	3	B
0	180°	10 Cycles	3	B
40	0°	10 Cycles	3	B
40	180°	10 Cycles	3	B
70	0°	10 Cycles	3	B
70	180°	10 Cycles	3	B



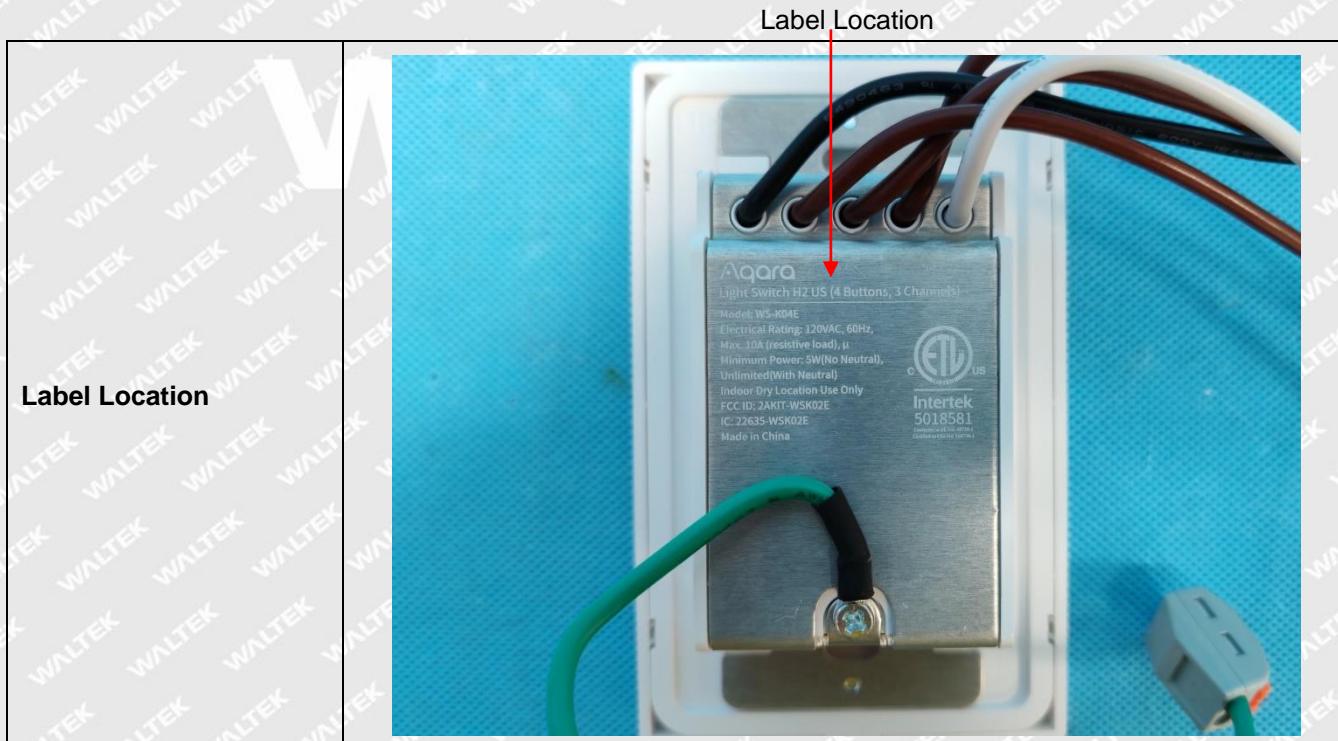
5. EXHIBIT 1 - PRODUCT LABELING

5.1 Proposed Label Format



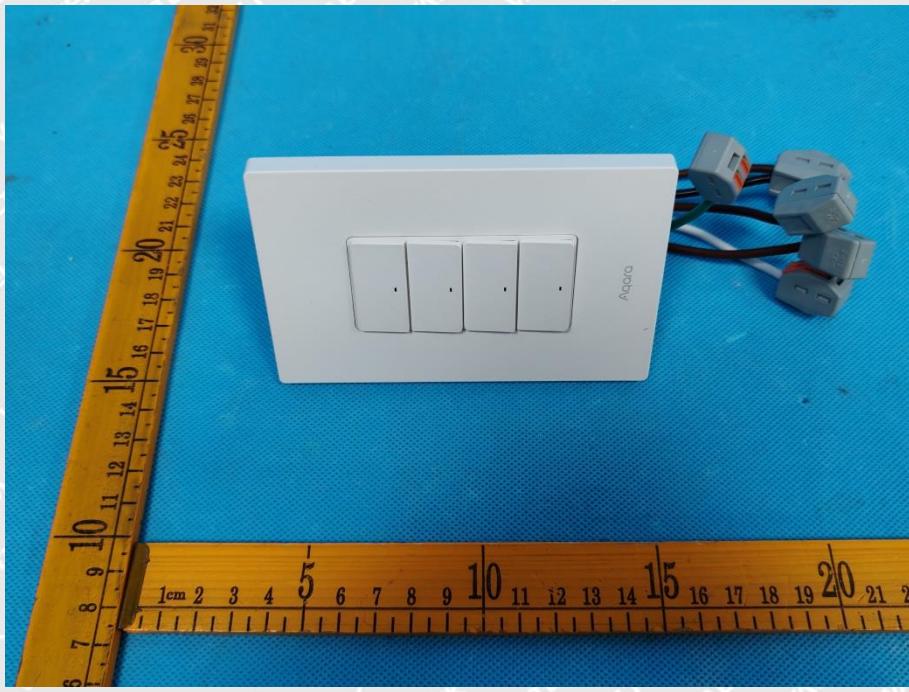
Specifications: Text is Black in colour and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. The supplier code number is needed which it is registered and DoC by the supplier.

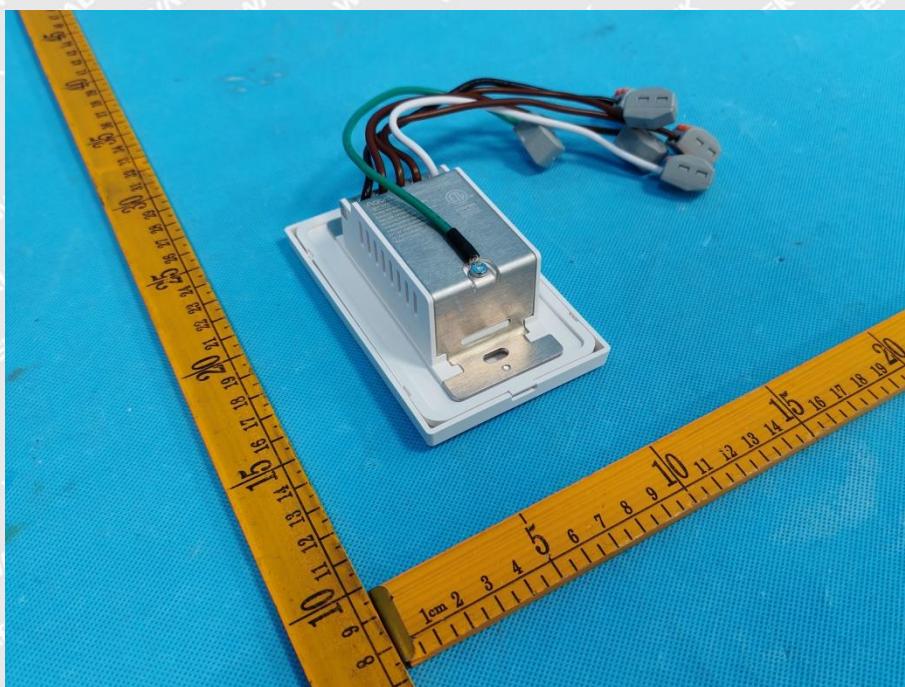
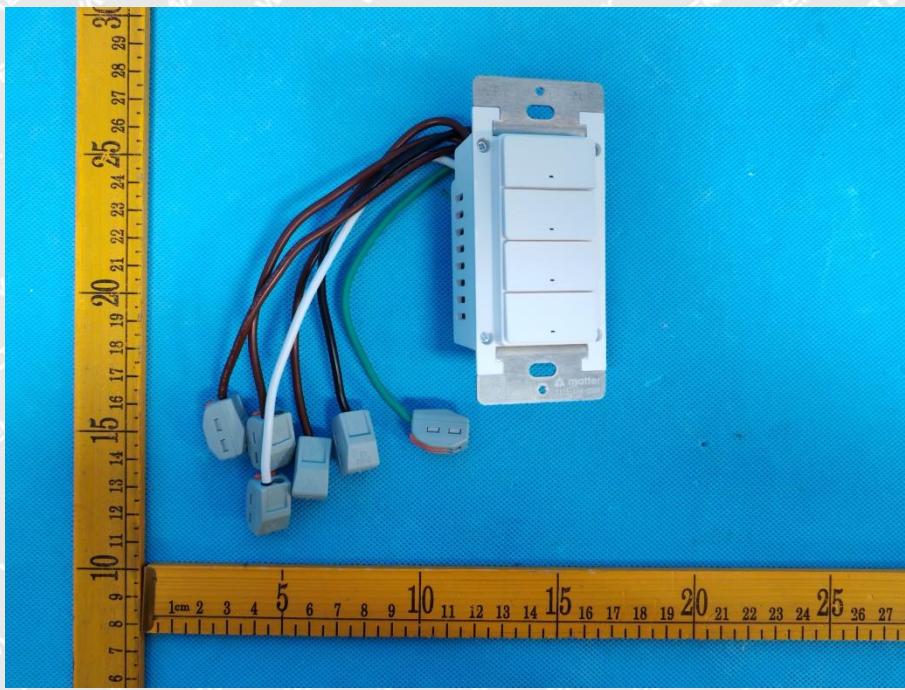
5.2 Proposed Label Location of EUT

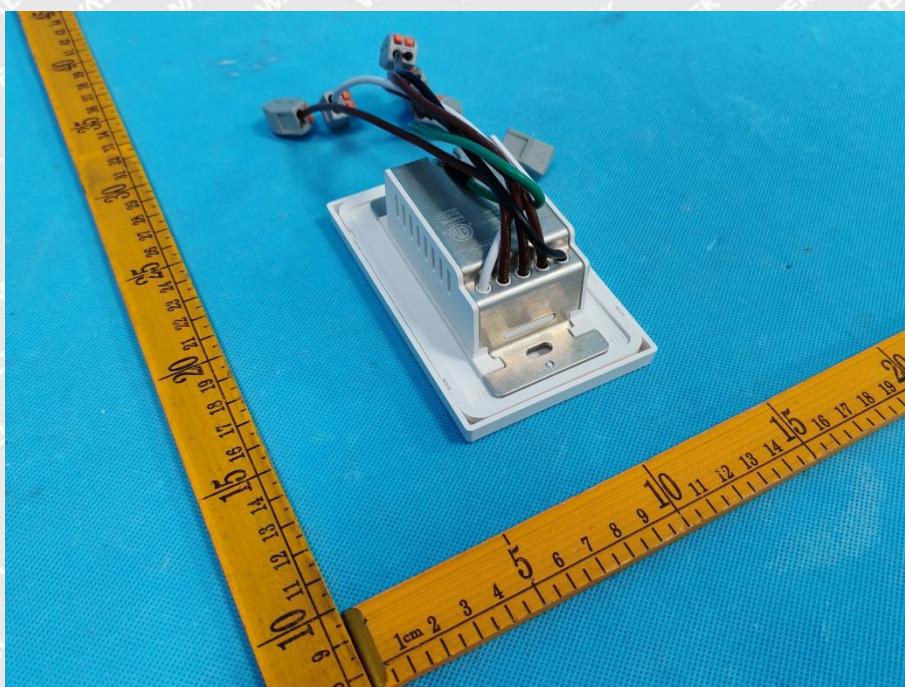


6. EXHIBIT 2 - EUT PHOTOGRAPHS

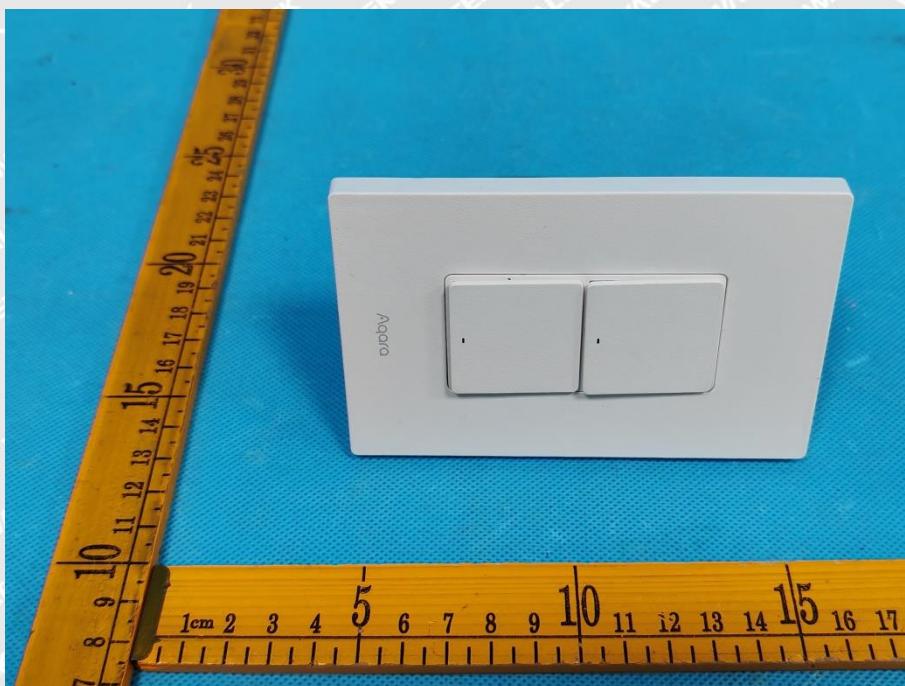
External
WS-K04E



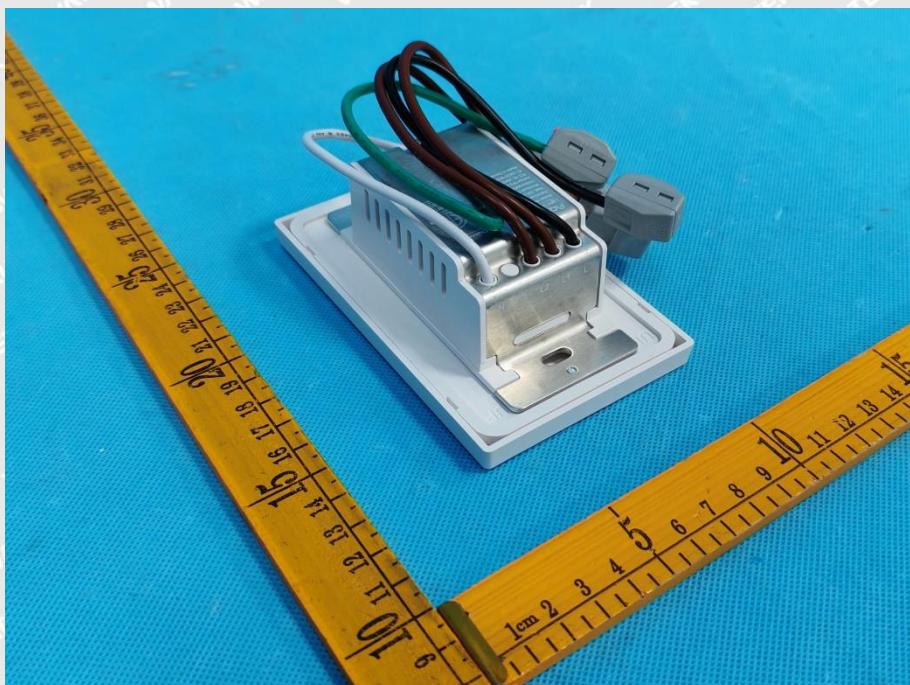


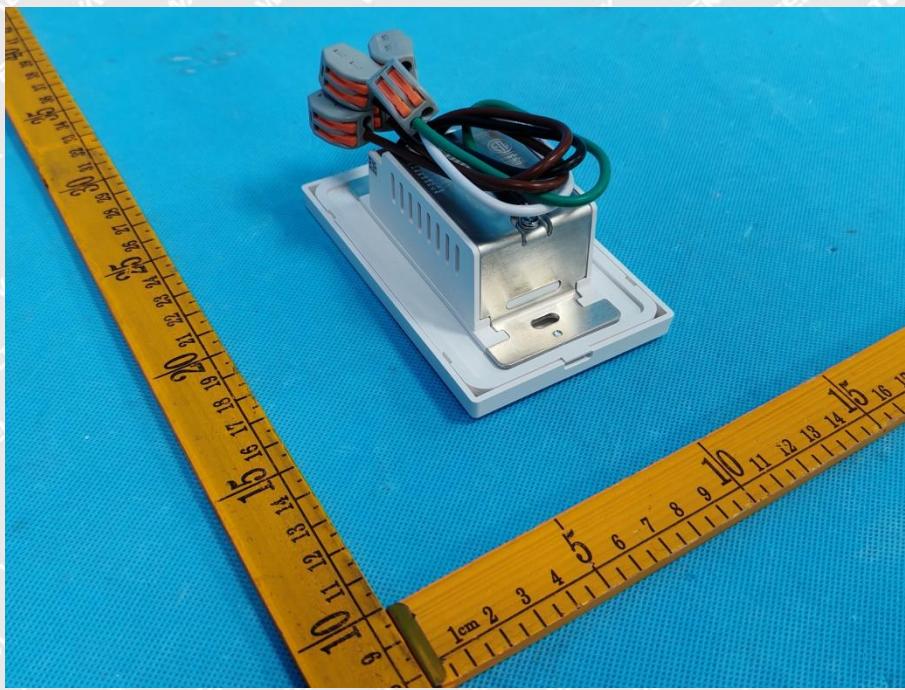


WS-K03E



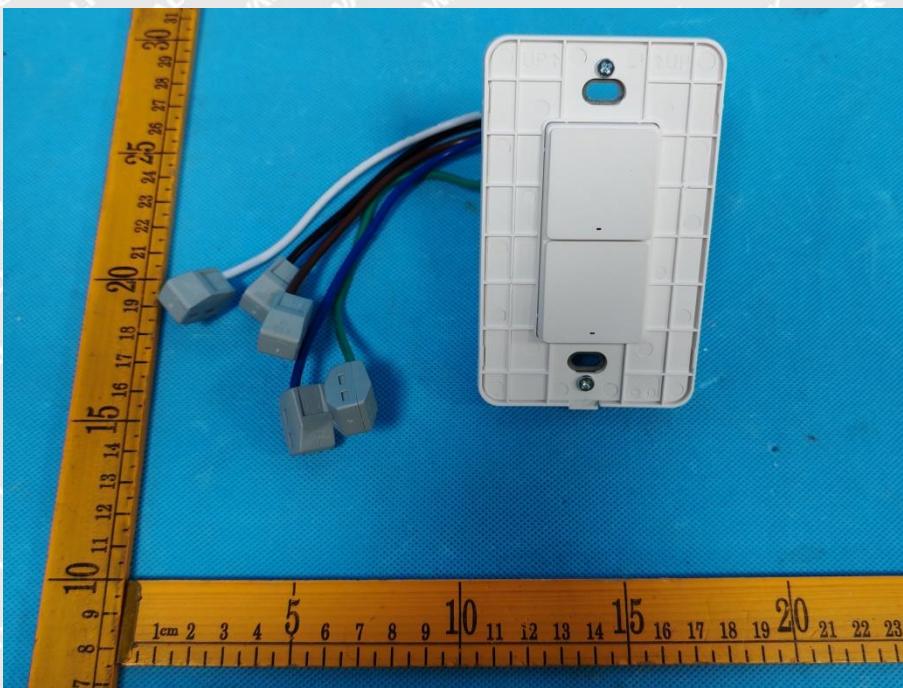
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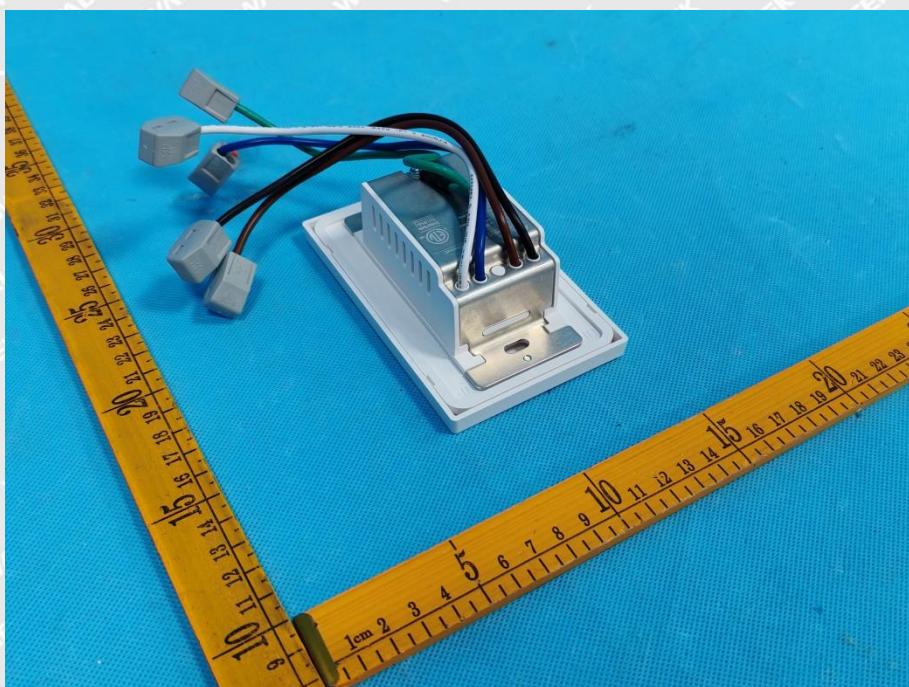
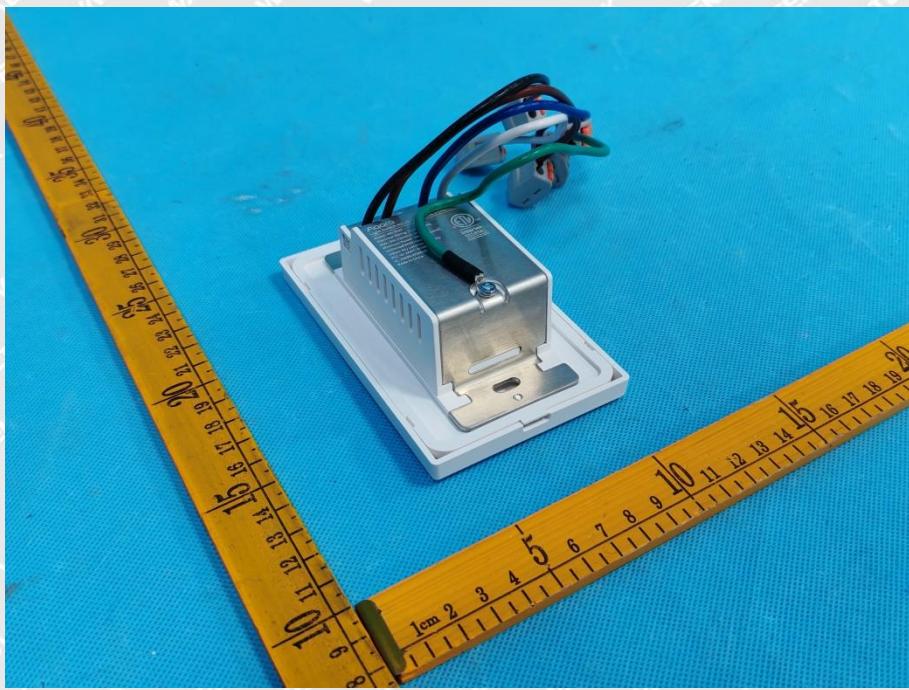






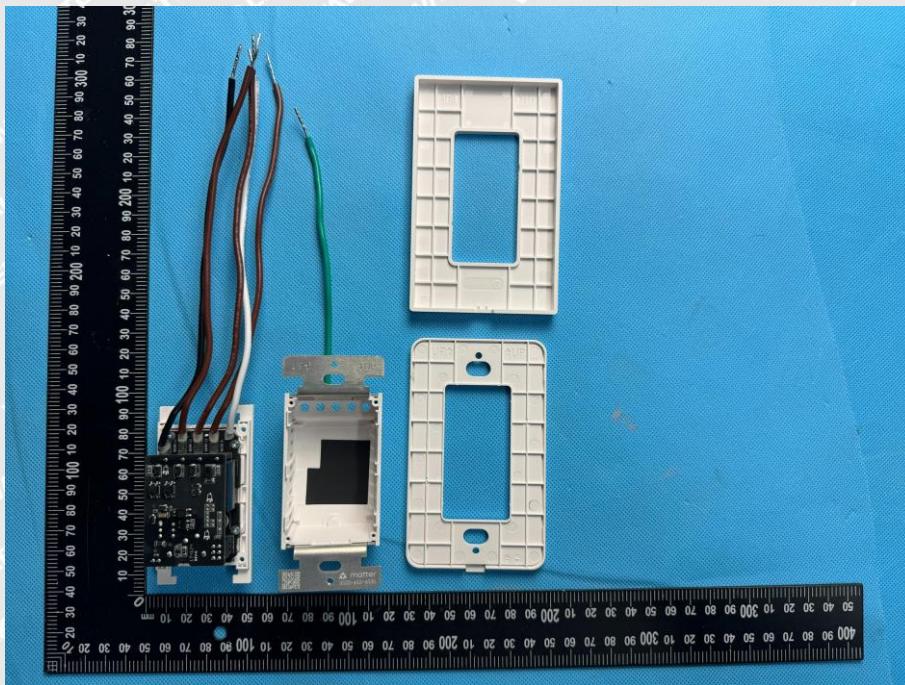
WS-K02E

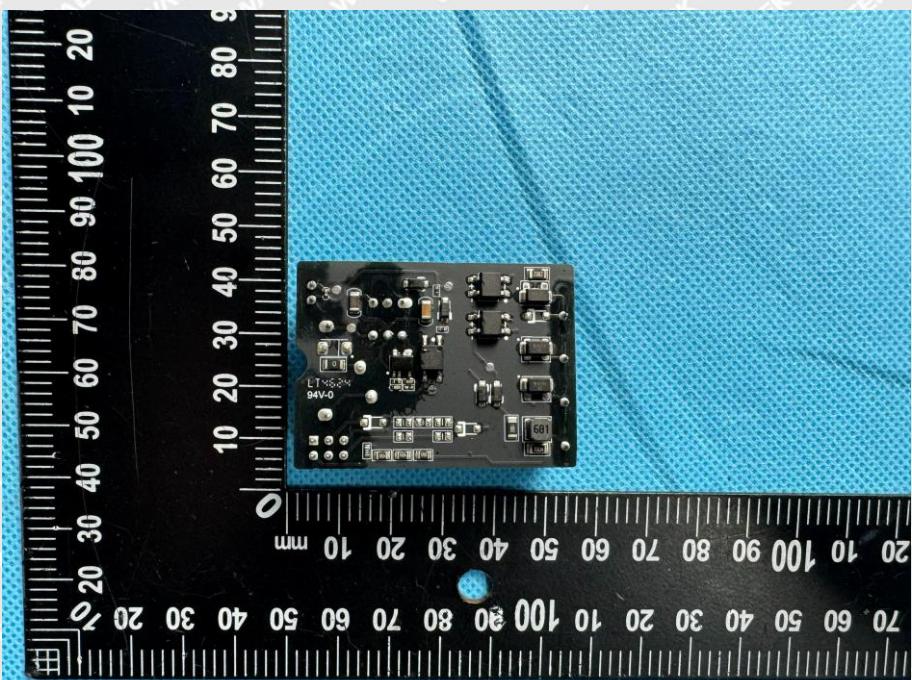
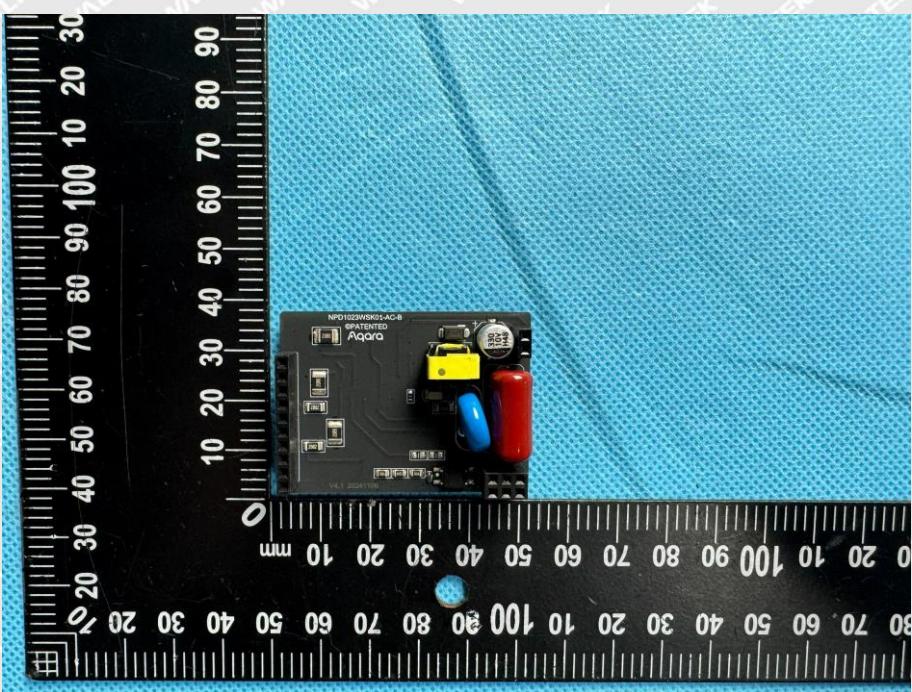


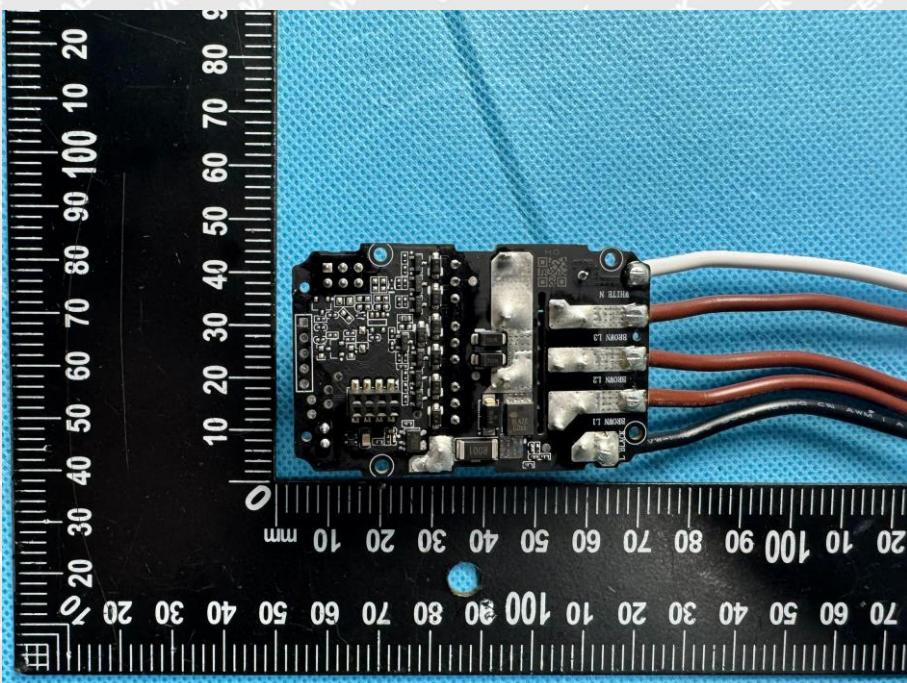
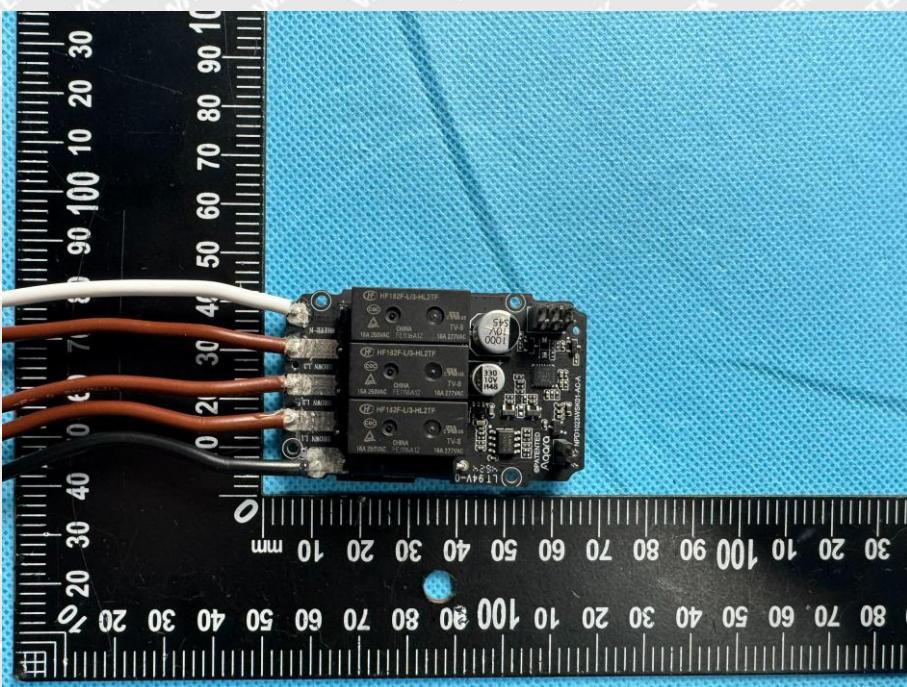




**Internal
WS-K04E**

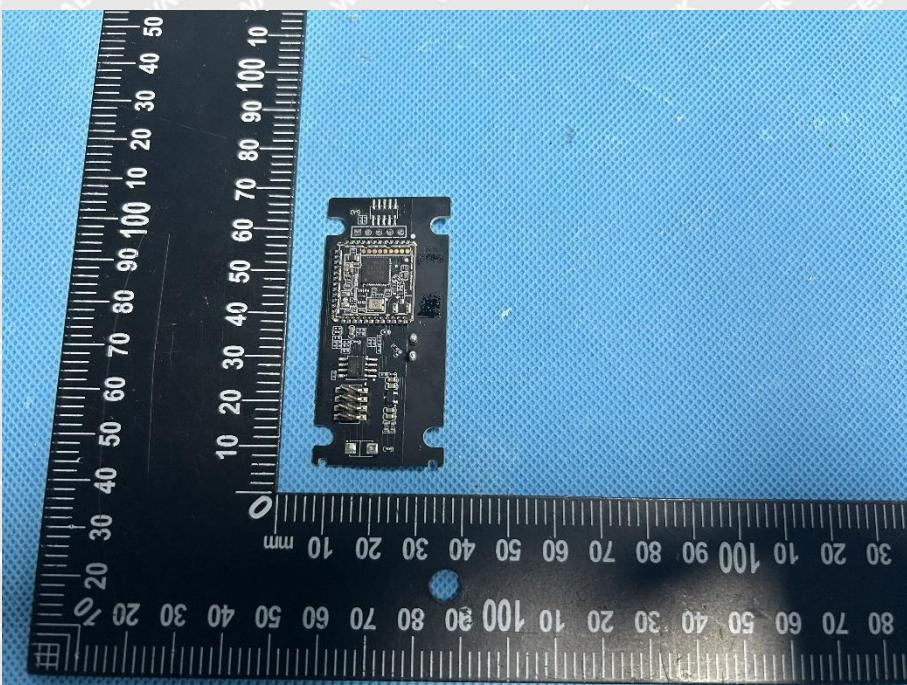
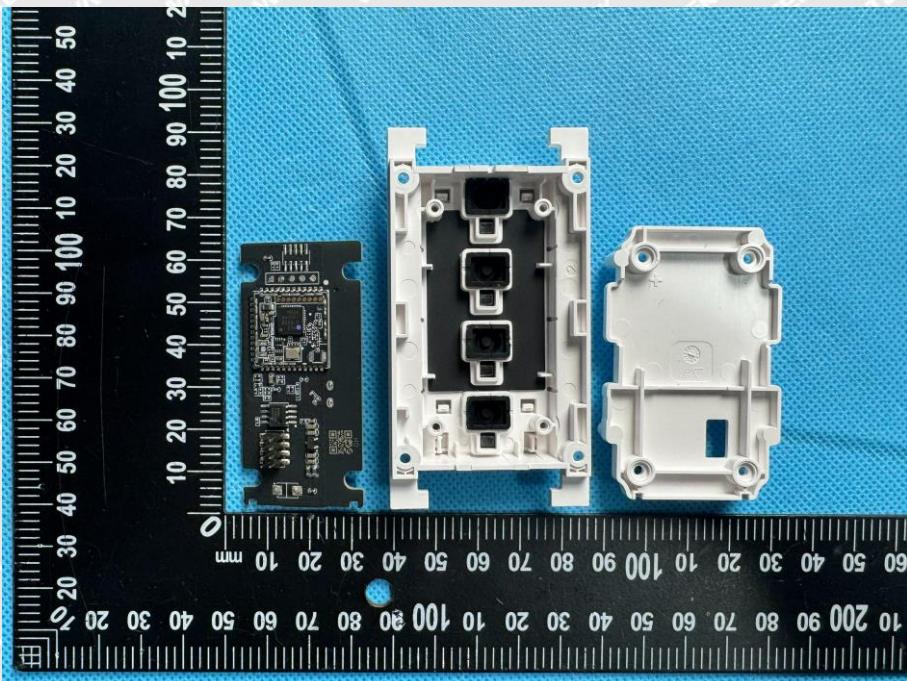






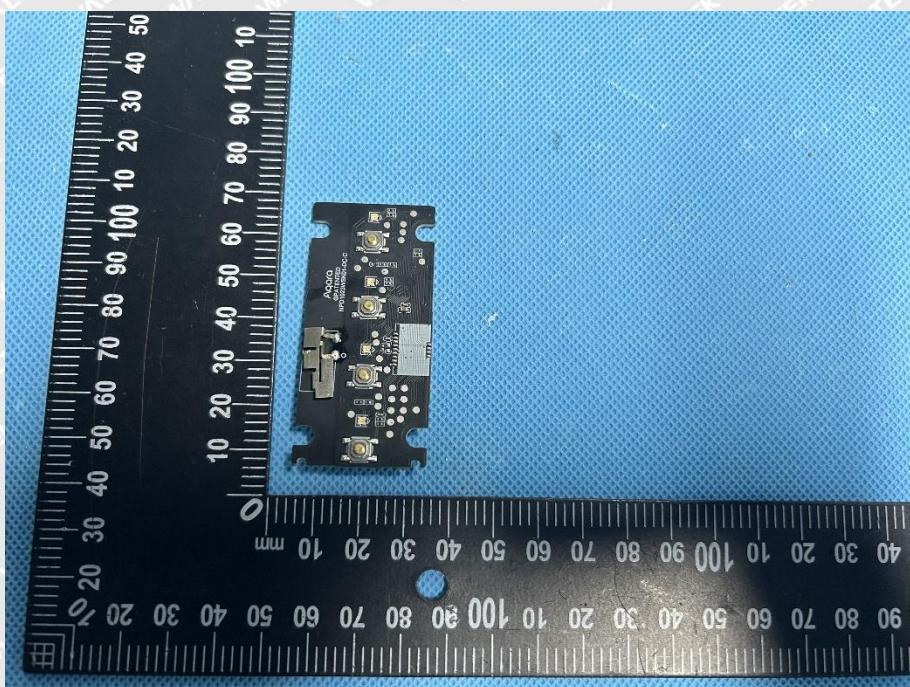


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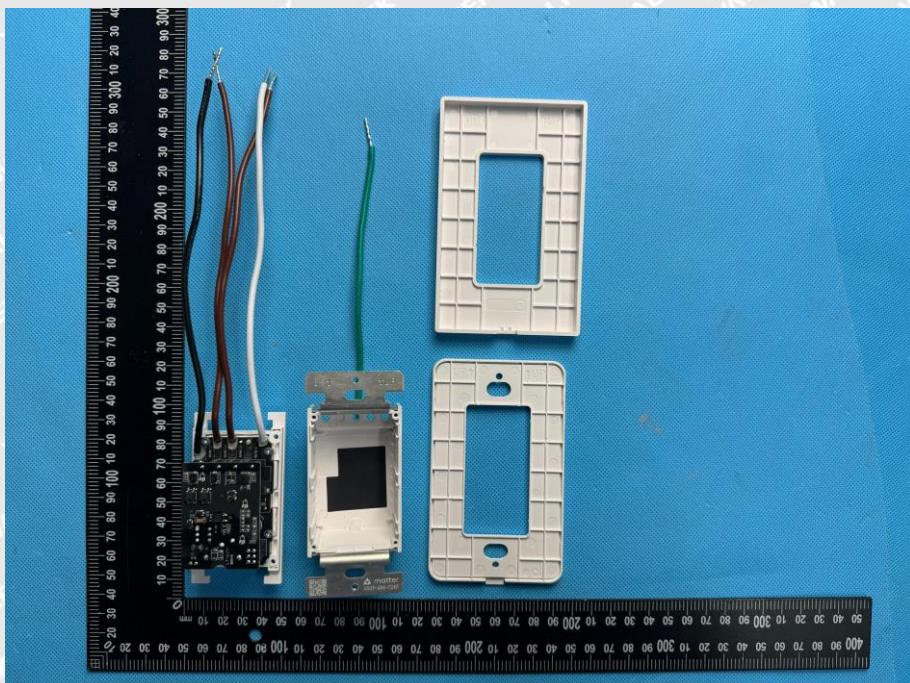


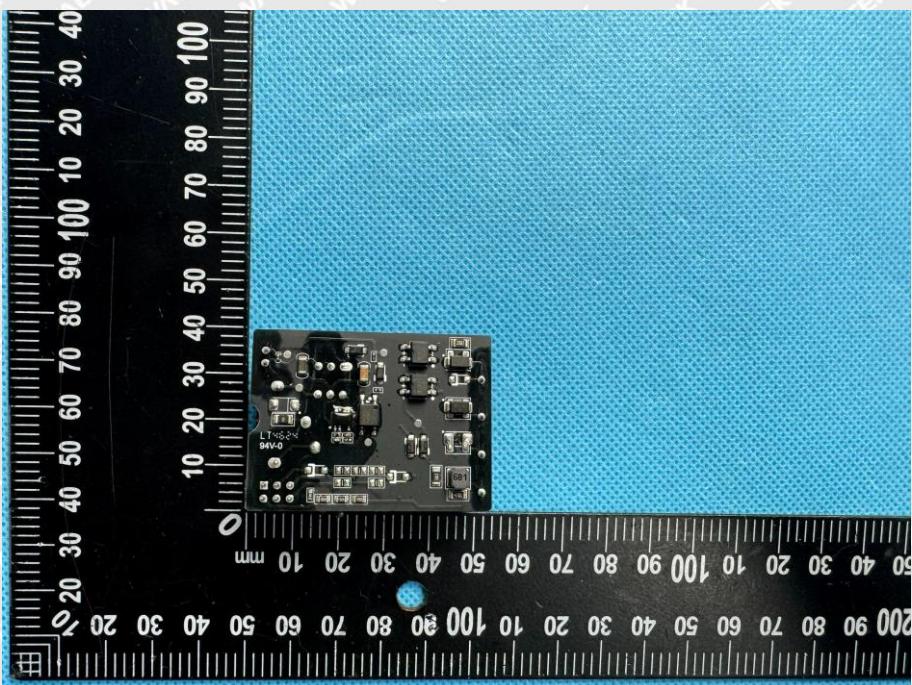
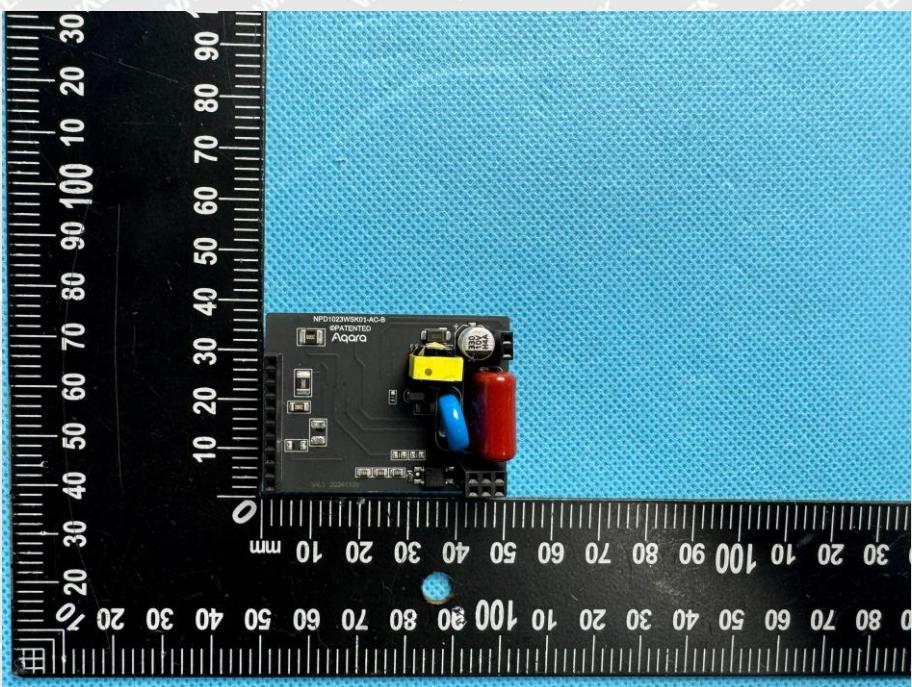


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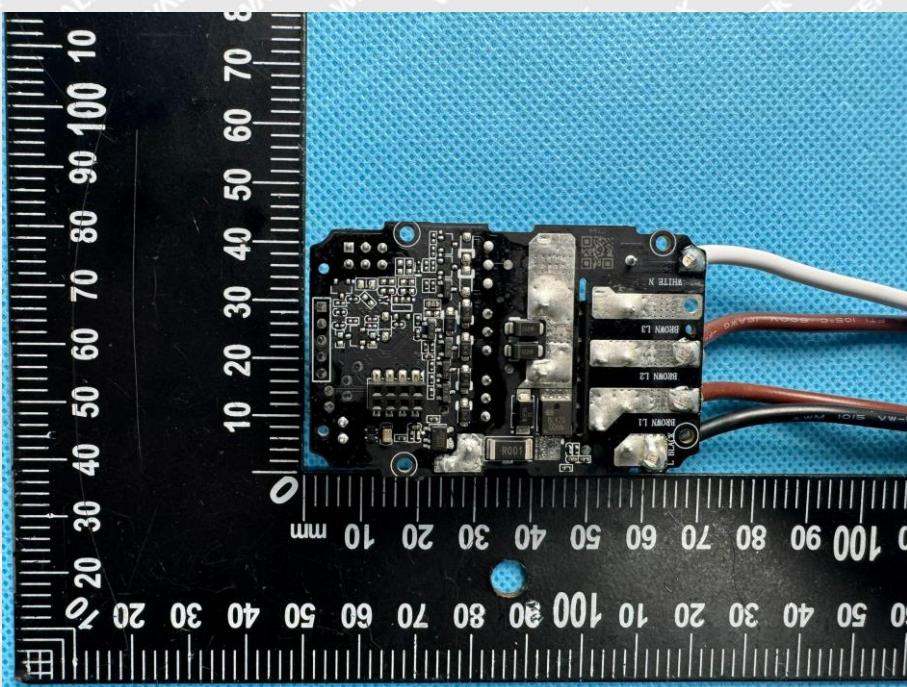
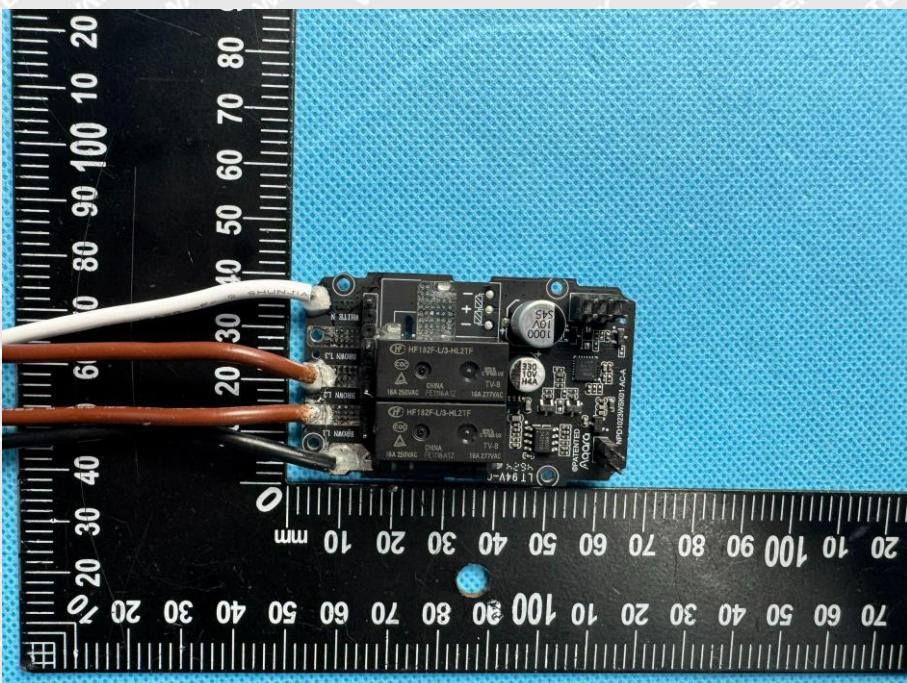
WS-K03E





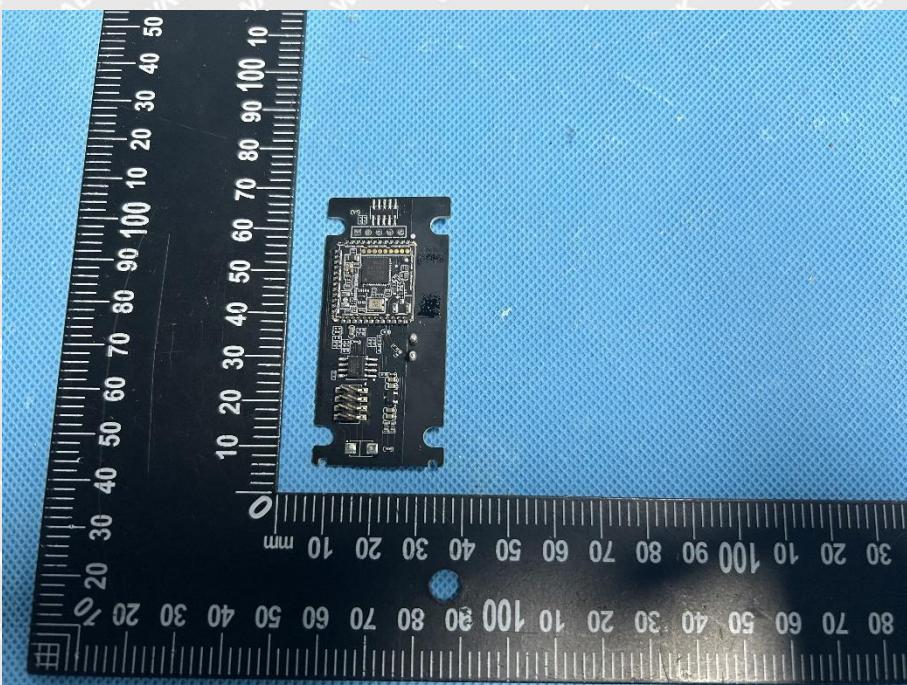
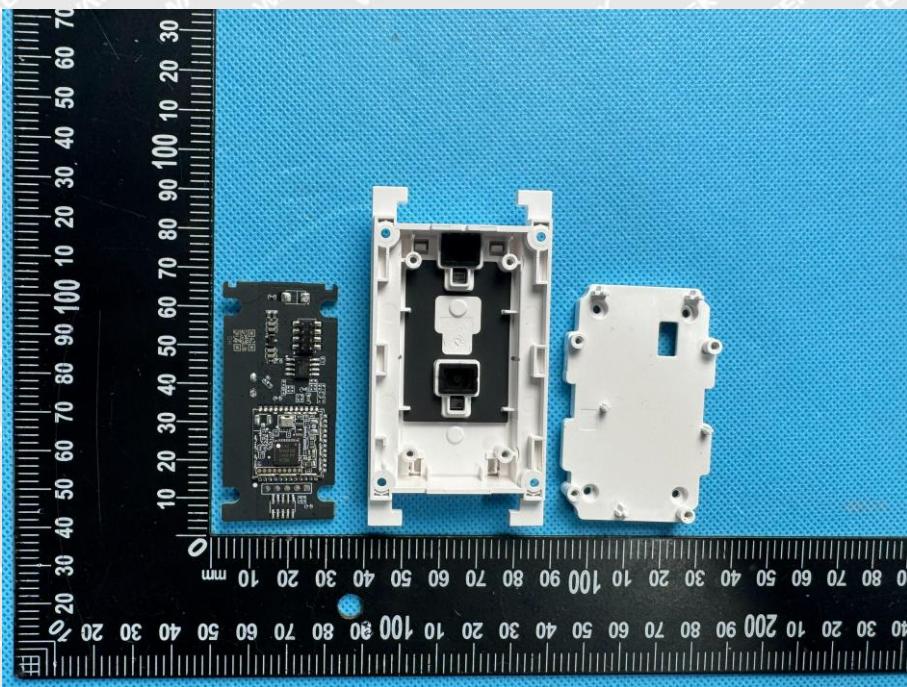


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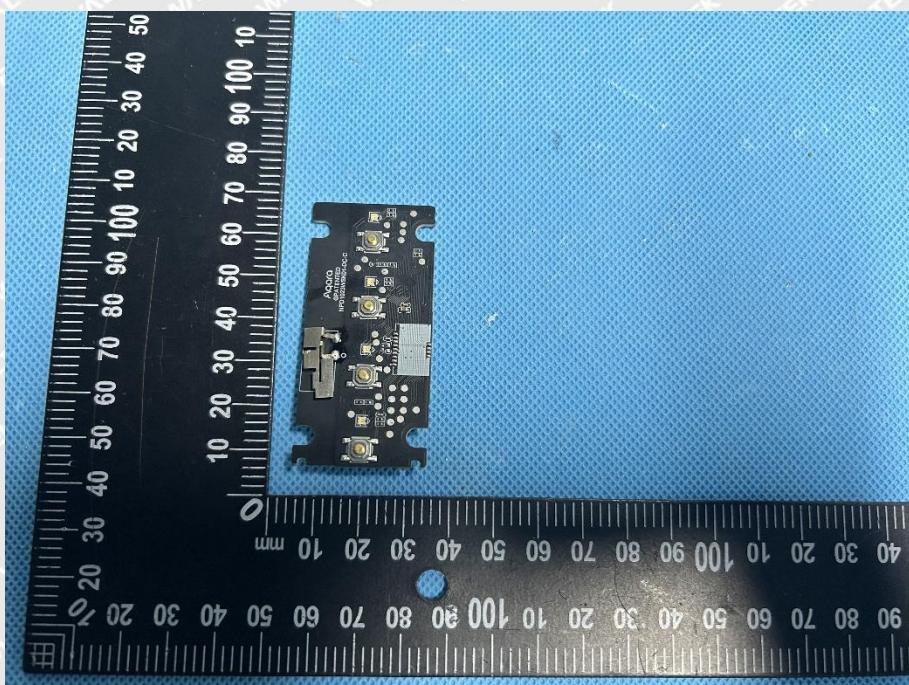


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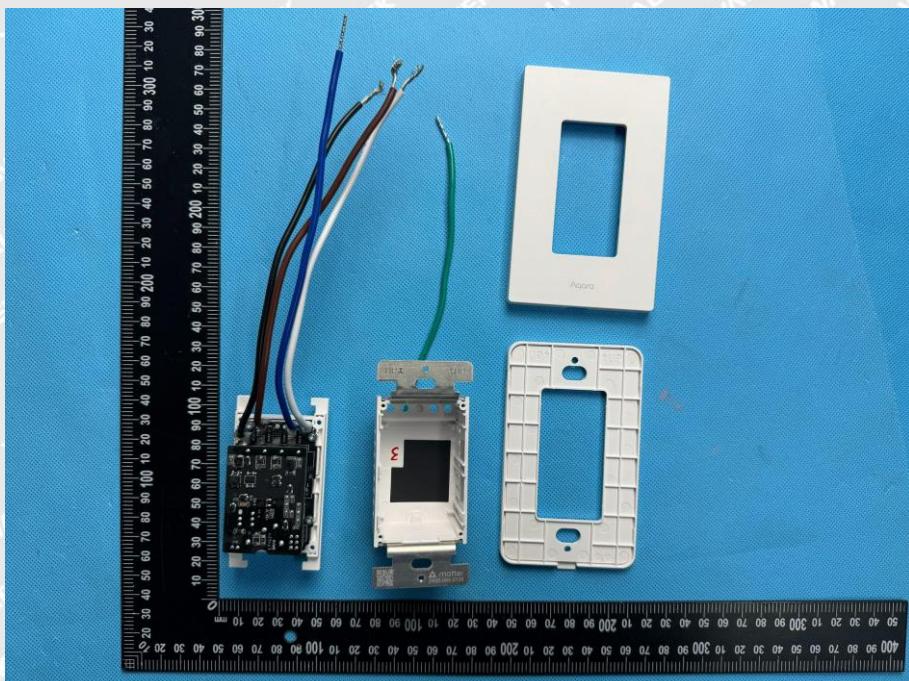


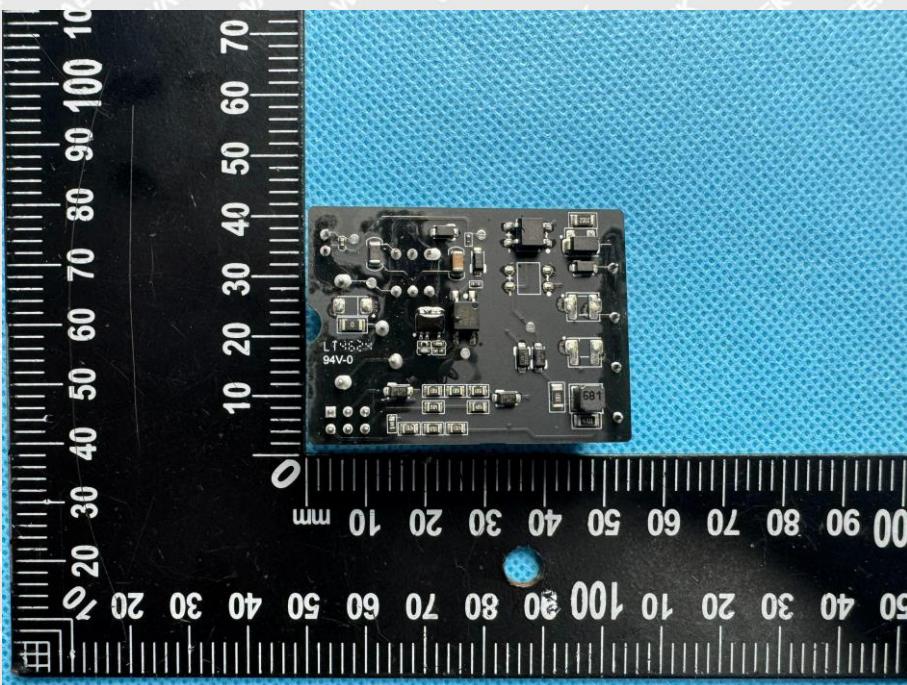
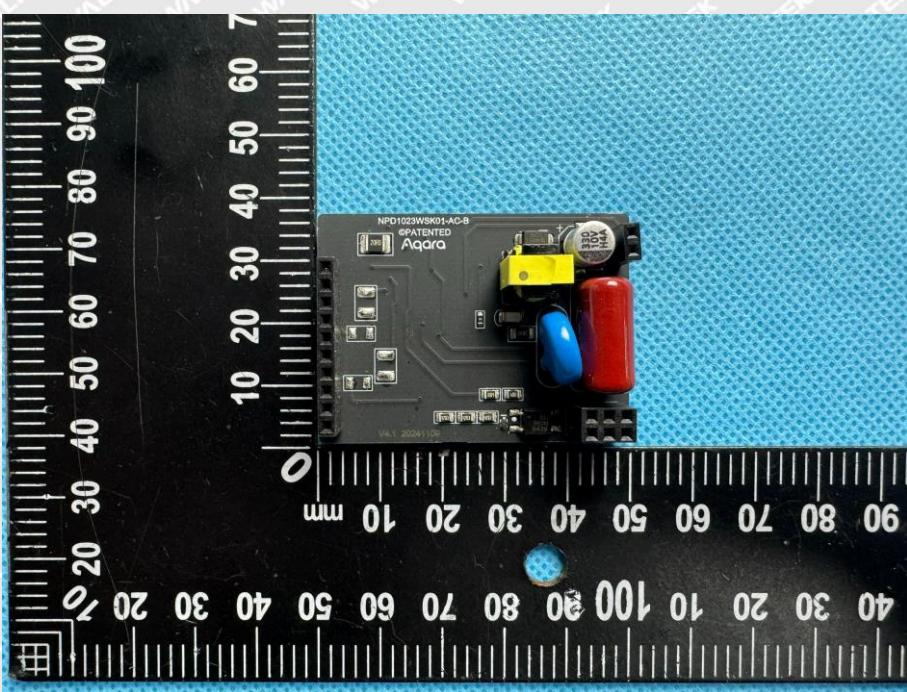


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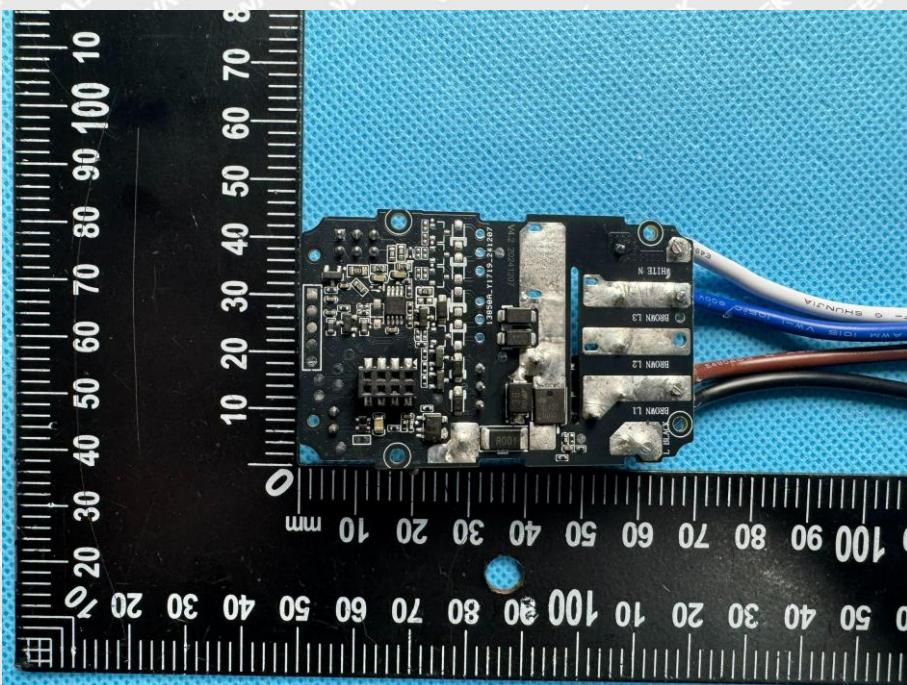
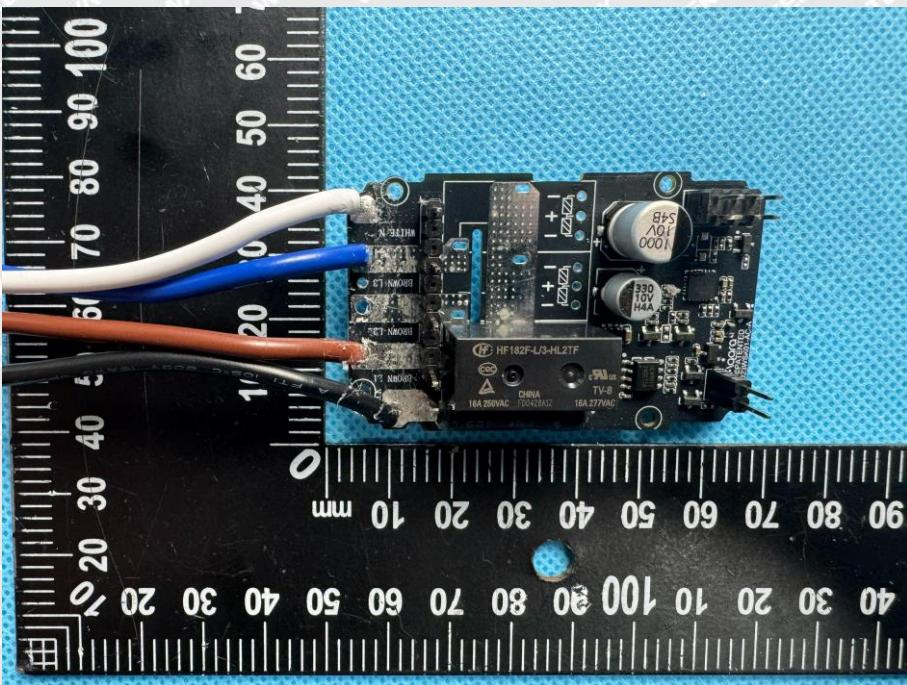
WS-K02E





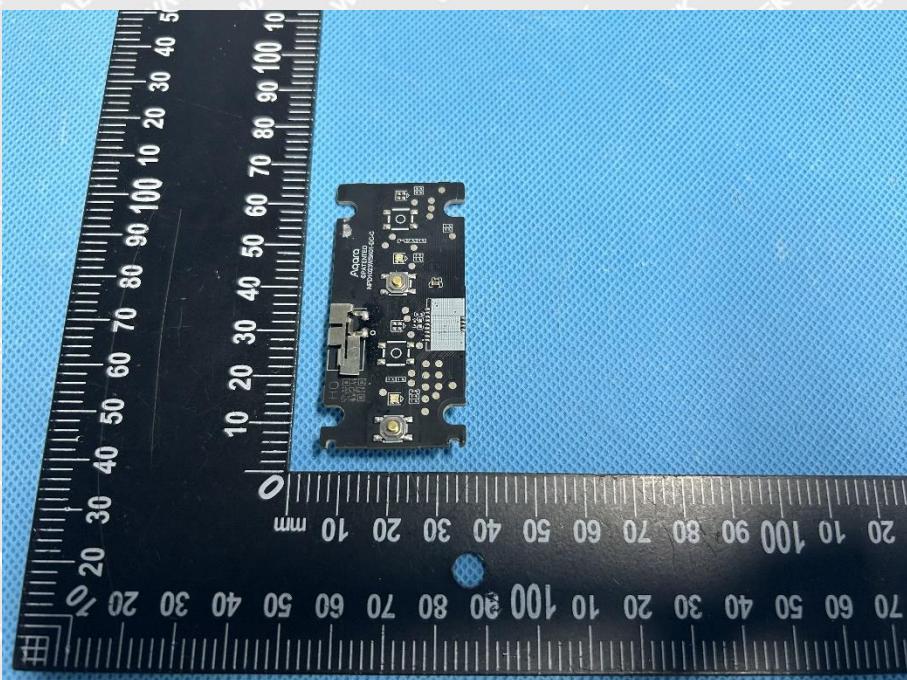
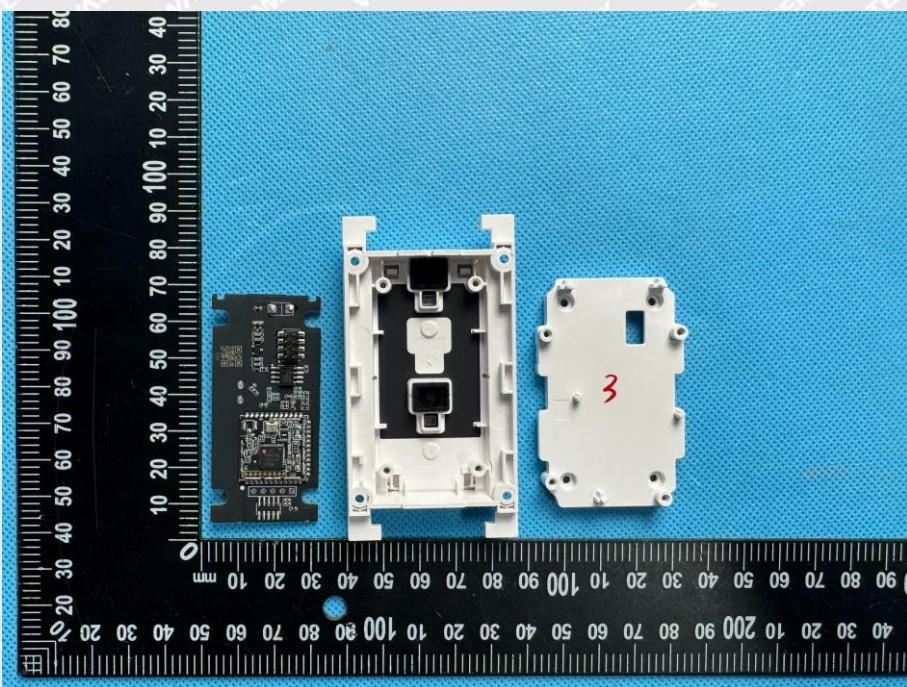


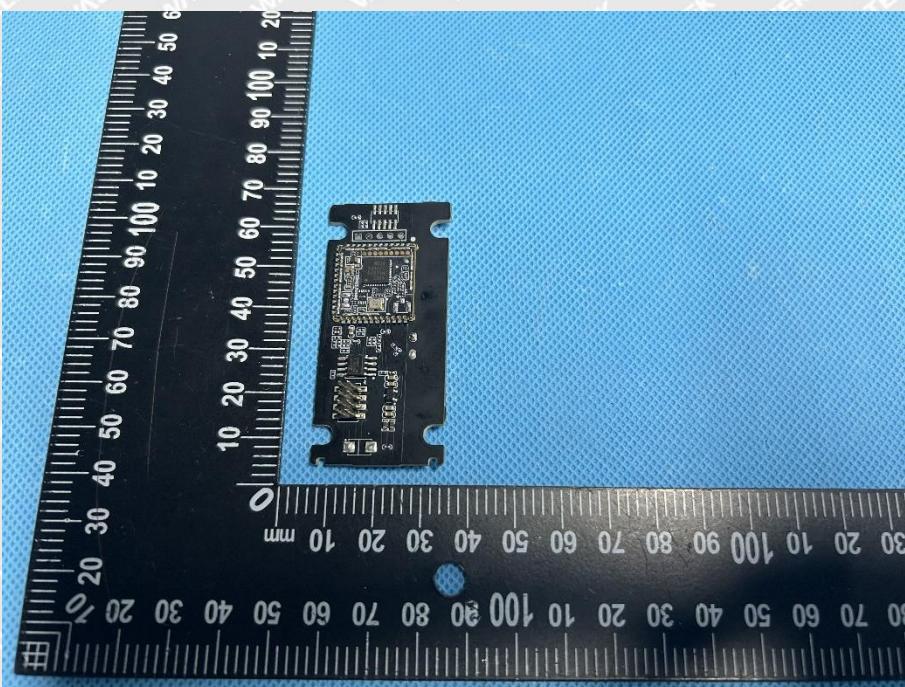
Reference No.: WTX24X10240801E





Reference No.: WTX24X10240801E





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7. EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Conducted radio-frequency emission on main terminals (9kHz-30MHz)

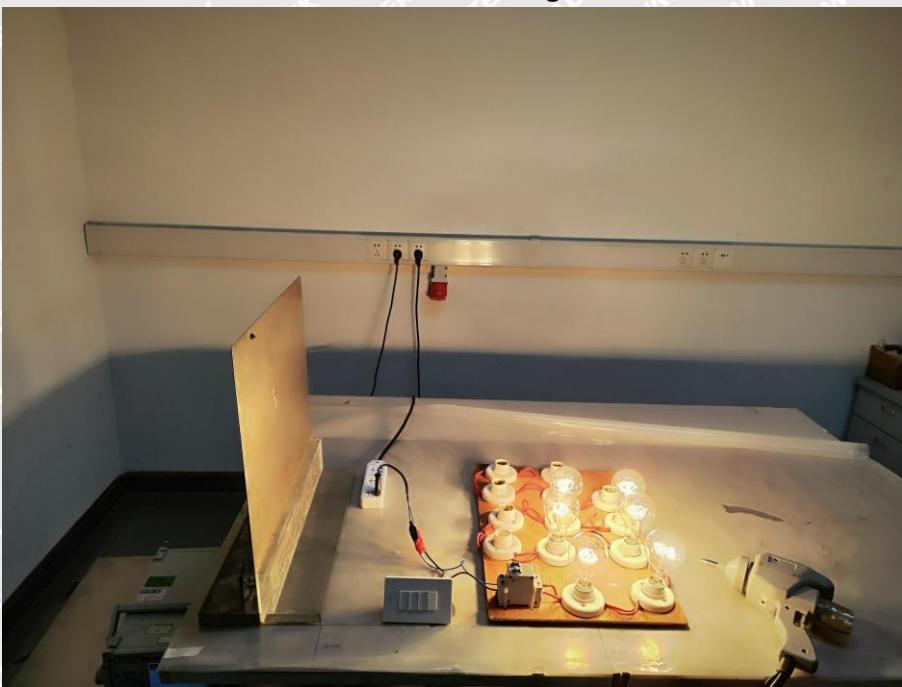


Low-frequency emission - Harmonic distortion
Low-frequency emission - Voltage fluctuations and flicker





Electrostatic discharge test

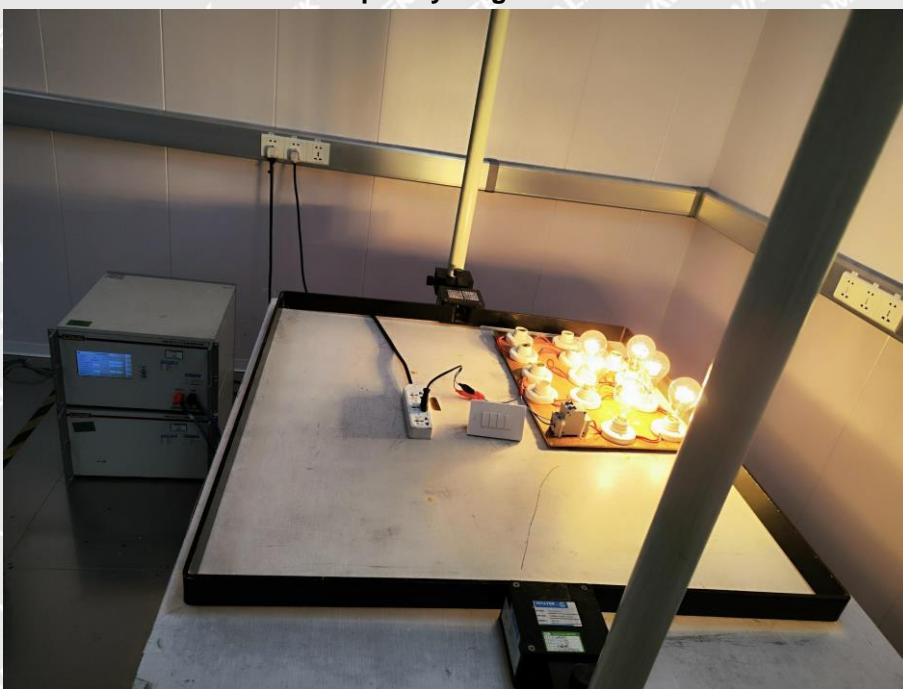


**Electrical fast transient/burst test (Supply terminals)
Surge immunity test for 1,2/50 wave impulses (Mains terminals)
Voltage dips and short interruptions**





Power-frequency magnetic field test



***** END OF REPORT *****

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